Harvard Medical

ALUMNI BULLETIN AUTUMN 1996

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1997–1998

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1
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2
planned an innovative program of study which in the Committee's opinion will contribute significantly to their development as teachers and scholars,
3
clearly planned to devote themselves to careers in academic medicine and the medical sciences.

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Harvard Medical School
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Boston, Massachusetts 02115
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Class Day co-moderator Donna Marie Manasseh '96 and her mother. Photo by Lionel Delevingne

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The Class of 1996 has graduated, the Class of 2000 has matriculated. Is the millenium ending or approaching? For four or five millenia there have been physicians. Ancient Egypt and Mesopotamia had social roles corresponding, more or less, to the modern M.D., and the identity has persisted, with fluctuating fortunes, ever since.

In a way, this is a remarkable fact; for a truly effective technology of medicine has emerged only within the last century. (Some surgical procedures have a longer history, as do odds and ends of other therapies. Bloodletting, the cornerstone of most medical practice for at least 3,000 years, had a few defensible uses but nowhere near enough to justify the extent of its application throughout Western medicine until roughly my great-grandfather's time.) In other words, the concept of a doctor who uses physical means to cure or ameliorate illness has persisted as if the *materia medica* were effective, for about 98 percent of the recorded history of medicine, and it is only in the last blink of time that the reality has come to correspond with the image.

Perhaps the reason doctors have had for being was precisely that the treatments weren't very good. And now, as my friend and colleague Jay Bonnar '91 recently pointed out to me, we so often know what is effective, and we are under enormous fiscal pressure to provide it efficiently. The end result, he suggests, may well be the steady dismemberment of the physician's identity (and therefore training) into a variety of lower-priced technical specialties. What need is there for an antidepressant technician to deliver a baby during his or her training? Or a rash technician to have a conversation with a psychotic patient? Why even have doctors as such—except perhaps to open gates and close them efficiently?

Even as we rejoice in the latest generation of hugely gifted, trained, and debt-burdened Harvard physicians, I think we must ask such questions; for all the economic pressures will drive us not only to accept lower pay and degraded working conditions but to relinquish our age-old identity. Then, quite possibly, no one will be left to fight our good fight.

As of this issue of HMAB, however, the happy warriors abound. Their reflections from the most recent Class and Alumni Days follow.

William Ira Bennett '68

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Letters

Faith Factor

In Herbert Benson's interesting and provocative article, "Wired for God," (Summer 1996) he notes that faith seems to transcend experience. Sometimes, however, experience almost transcends and certainly reinforces faith.

Let me illustrate. In 1952, after spending a year in Paris studying tropical medicine, and shortly after arriving in interior Cote d'Ivoire, West Africa, hundreds of miles from significant medical care, I found myself confronted with a small boy shot in the mid-abdomen in a hunting accident. The wound was by a dum-dum, expanding 22 bullet.With two American missionary nurses, I had spent most of the day unpacking my equipment and sterilizing an obstetric and surgical pack in a pressure cooker for an anticipated delivery.

There was no other choice—send the child away or operate and try to save his life. It was truly kitchen-table surgery. One nurse dropped ether onto the mask according to my instructions as we went along, while the other assisted me. My wife held the flashlight and wielded a fly swatter.

Upon opening the abdomen I found the small bowel shattered in one location and multiply perforated elsewhere. My heart sank. I had had some surgical training but was by no means an accomplished surgeon. By the time I had finished a resection and reanastamosis, the child's blood pressure was rapidly dropping and the pulse increasing. Therefore, I closed eight other perforations with a single stitch each and rapidly closed the abdomen. We had no IV fluids. Postoperatively, I set up a siphon-type gastric suction, but it failed to function. Nevertheless, during the night the little patient seemed to stabilize.

The next morning I listened to his abdomen and was amazed to hear normal bowel sounds. But he was severely anemic. We needed blood, yet the only person who cross-matched properly was the one who shot the boy. I could have obtained four liters from him, but needed only one unit. The child recovered rapidly. The news spread that I had performed a miracle. Actually, all I had done was to do exactly what I had learned in dog surgery. Even so, I believe that I had witnessed a miracle.

During the next several years in Africa, that experience in various forms was often repeated, each incident strengthening my faith for the almost overwhelming task of providing health care and seeking to reflect God's love in a neglected part of a French colony.

Charles B. Beal '46

Who Dunnit?

As a student (Class of '52) who often sat in the Ether Dome tiers at the Mass. General, and later was chief surgical resident (1953-57) at Roosevelt (NY City) where Hall, Kelly, Halstead and McBurney operated and taught, I cannot let Dr. S.H. Moore's article "Who Did the First Appendectomy?" (Summer 1996) go unchallenged.

Just who was Alfred Worcester and why is it important to note his surgical exploit?

I have just reviewed my library sources with respect to the historical nature of appendectomy and note this review:

In 1951 John Burke of the Department of Surgery at the University of Buffalo School of Medicine published an article entitled "Early Aspects of Appendicitis." This was a 12-page review with 59 references (*Surgery*, volume 30, number 5, pages 905-917) and nowhere is there mention of the name Alfred Worcester. This surgical review article was only 18 years after Dr. Moore's related visit with Dr. Worcester.

In 1963 there was an editorial in *JAMA* (volume 185, number 3, July 20, 1963, pages 140-41) regarding Dr. Reginald Heber Fitz commenting upon Fitz's contribution to appendicitis/appendectomy management. There is no reference to Worcester.

In 1966 there was an editorial in *JAMA* (volume 197, number 13, September 26, 1966, pages 1098-99) regarding Dr. Charles McBurney. Although the editorial was not about verifying the originator of appendectomy, there is no hint of Worcester in the acknowledging of Fitz's report of 1886 to the Association of American Physicians and McBurney's report of 1889.

In 1985 Dr. Daniel H. Carmichael of Oklahoma City reviewed Fitz's con-

tributions to the management of appendicitis ("Reginald Fitz and Appendicitis," *Southern Medical Journal*, volume 78, number 6, June 1985, pages 725-730). This article quotes numerous famous and leading surgeons of the late 1800s, e.g., Howard A. Kelly, Charles McBurney, Will Mayo; and of the early 1900s: Dean E.H. Bradford of Harvard Medical School, W.H. McKean, professor of surgery at Jefferson Medical School, and W.S. Thayer at Johns Hopkins, to name some. These medical leaders nowhere acknowledge Alfred Worcester as performing the first appendectomy in New England. Indeed, Worcester, as a pupil of Reginald Fitz, is mentioned at the end of this article only in terms of praising his teacher.

Finally (and most recently, from my own references) J. Lynwood Herrington Jr., professor of surgery at Vanderbilt, published a very thorough review, "The Vermiform Appendix: Its Surgical History" (*Contemporary Surgery*, volume 39, October 1991, pages 36-44), which was 8 pages long and had 77 references. Interestingly, there is no reference to or mention of Alfred Worcester performing the first of anything.

From this investigation of the literature, I have arrived at three conclusions:

- As Harvard has gotten into the multicultural and political correctness business in the last few years, I wonder if Dr. Moore's point is endeavoring somehow to get Harvard into the "appendicitis/appendectomy" story more than it is already.
- Is it important or necessary to recognize that a Harvard surgeon performed the first appendectomy in New England in 1886? I am surprised there is no reference to the first black surgeon to perform an appendectomy (in the U.S.) or the first German immigrant surgeon who did the first appendectomy in Wisconsin, ad. inf., etc., ad nauseam.
- If Dr. Moore's article is to tweak historical curiosity, he has tweaked!

I am now searching for evidence of the surgeon (hopefully a Harvardian) who performed the first appendectomy in North Carolina!

Wesley Grimes Byerly '52

Moore replies

I agree completely with Dr. Byerly that there is no point in promoting the idea that Dr. Alfred Worcester made a name for himself by being the first New England surgeon to do an appendectomy, or that Harvard graduates should be given any accolades as the first to do this operation. My purpose in presenting the brief account was to let the reader join me in my search for an answer to Donald Gates' comment in 1933 that he knew the doctor who performed the first appendectomy, namely, Alfred Worcester.

I thank Dr. Byerly for his letter because it focuses more attention on Alfred Worcester, whose vigorous campaign to persuade his fellow physicians to be aggressive and operate early to save lives was really impressive. When he came to Harvard to be in charge of the student health program, the rumor that he had done the first appendectomy soon spread all over the Yard. My aim was to separate the myths from the truths.

I now can see another advantage of my article. When anyone asks Dr. Byerly if he knows anything about Dr. Worcester, he can impress that person by promptly saying, "Oh yes. You see, I read the *Harvard Medical Alumni Bulletin*."

S. Halcuit Moore, Jr. '35

The Perspective of Disability

Where there are many myths and misconceptions about people with disabilities, a relatively new HMS program has set out to confront them head on. Joel Stein, director of the inpatient physical medicine and rehabilitation service at Spaulding Rehabilitation Hospital, organized the program to bring medical students face-to-face with current and former Spaulding patients. More than 100 HMS students participated in the 19-session program, which has been offered the past three years to all first-year students at the end of Patient-Doctor I.

Judy Gilbert, one of this year's volunteers, began her session by explaining some of the barriers she faces. She had a stroke 22 years ago and has since then relied on a wheelchair; only her right arm is unimpaired. "Some people have not taken the time to wonder what it's like to live with a disability," she told the students. "It is critically important that you see a disabled person as a whole person, one who relates to friends and family, as a functioning human being, not someone who is ill."

Other volunteers in the program have equally limiting disabilities, such as caused by stroke, spinal cord injury, multiple sclerosis and cerebral palsy.

Stein pointed out three common myths about disabled patients:

- Everybody with a disability is the same.
- People with disabilities always want help.
- People with disabilities never want help.

Though everybody with a disability is not the same, Stein did say there are common challenges they face, such as fastening buttons or tying shoelaces. Doctors may be involved in such problems as transferring a patient from a wheelchair to an exam table or in working around a patient's involuntary

movements during a physical examination. He also pointed out that it cannot be assumed that sexuality goes away along with use of the limbs.

It is important for medical students, says Stein, "to gain knowledge about living with disabilities, thereby developing a capacity to ask questions showing sensitivity and awareness."

Helper Cells to the Rescue

Researchers have realized that the body's arsenal to fight invading pathogens is much more extensive than they had thought only 20 years ago. When a foreign antigen enters the body, the immune system does not simply mount a generic "immune response," but instead, carefully assembles for dispatch a specialized army of defense cells. Two Harvard research groups recently discovered the identity and function of genes that direct the recruitment and differentiation of a T helper-cell army during an immune response.

Nine years ago researchers discovered that the body has two distinct types of T helper cells, which differ by the type of physiological defense mechanisms they rally to carry out battle with a pathogen. When it turned out a few years later that the balance between these two T helper cells was intimately linked to disease, the search began to uncover the molecular basis of this differentiation. Recently, separate research groups led respectively by Laurie Glimcher '76 and Michael Grusby have filled in three major pieces of the puzzle.

Glimcher, Irene Heinz Given Professor of Immunology at the Harvard School of Public Health and professor of medicine at Harvard Medical School, reported in the June 28 *Cell* that a transcription factor called c-maf is expressed only in T helper 2 cells, and that it probably drives additional undifferentiated T cells to mature specifically into T helper 2 cells. It effectively helps to recruit a Th 2 army.

Concurrently, Grusby, assistant professor at the Harvard School of Public Health and at Harvard Medical School, shed light on another segment in the molecular chain of events

Michael Grusby and Laurie Glimcher

photo by Steve Gilbert

leading to differentiation. He and his colleagues reported in the July 11 *Nature* that a member of the STAT family of signaling proteins, Stat4, turns out to be a "master switch" in the development of T helper 1 cells. This paper was on the heels of Grusby's report in the March *Immunity* showing that Stat6 switches on the development.

When the immune system needs T helper cells to combat a pathogen, it does so by instructing T cells, which have not yet encountered a foreign antigen, to mature into either T helper 1 or T helper 2 cells.

These specialized T cell subsets normally arise in just the right balance to orchestrate an attack against the invader. But the system is out of kilter in several immune-system disorders. The swollen joints in rheumatoid arthritis, for example, contain too many Th 1 cells, as do organs under assault by the body's defense system in other autoimmune diseases.

Conversely, Th 2 cells greatly outnumber Th 1 cells in certain infectious diseases and tumors.

Consequently, researchers have set their sights on trying to tip the T helper-cell balance as a way to treat immune disorders much more specifically than the current, generalized immunosuppressants.

"Almost every disease that is mediated by the cellular arm of the immune system is in some aspects controlled by T helper-cell subsets," says Grusby.

That is why the idea of manipulating the balance of Th 1 and Th 2 cells holds such general appeal as a potential new approach to treatment.

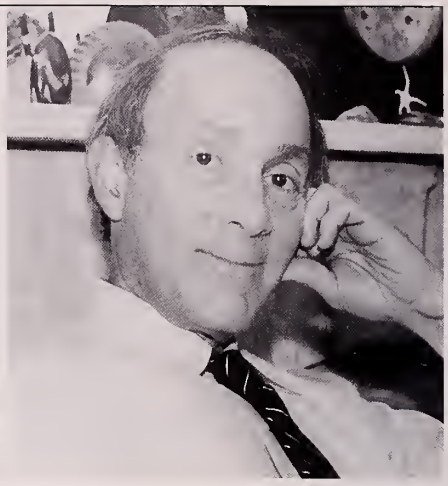
Center for Health and the Global Environment Opens

At a Harvard-MIT symposium four years ago, a group of HMS physicians who had helped form Physicians for Social Responsibility (which was the co-recipient of the 1985 Nobel Prize) to address the issue of nuclear war three decades earlier, began a new campaign. Their goal was to educate the public on the effects of the global environment on human health, a mission that has been formalized with the opening of the Center for Health and the Global Environment on June 17 at HMS. It is the first center of its kind at a U.S. medical school.

Under the leadership of Eric Chivian '68, HMS assistant clinical professor of psychiatry, the center will be involved in a variety of activities to make people aware of how they will be affected by the changing environment.

"Despite all of the scientific information about global climate change and species loss and the ozone layer, people still see themselves as separate from the environment," comments Chivian. "They find the implications too frightening, too abstract, too hard to imagine." Yet there is now an increased risk for skin cancer due to the weakened ozone layer, and infectious diseases are on the rise from global warming and changing weather patterns.

Chivian and his staff hope to increase people's awareness through public education and coordination of national and international research efforts, in addition to working directly with policymakers. The center will also develop a student course on human health and the global environment, another first for a U.S. medical school. The curriculum will cover a broad spectrum—from the consequences of species extinction and pollution of ecosystems, to the ethical and policy implications of the degrading global environment.



Eric Chivian

photo by Steve Gilbert

"We think medical students really need to know about these issues and that future physicians need to be involved in educating the public and policymakers," adds Chivian. It will be open to both HMS and Harvard University students and is expected to become a model for other medical schools and universities.

Along with these educational efforts, the center will develop a research agenda for the next decade on the areas of the changing environment that pose the most risk to human life. This information will then be presented to the United Nations and the administration in Washington. In addition, through a site on the World Wide Web, the center will act as a clearinghouse for research and post a monthly newsletter.

"What we most want to accomplish is to place human health at the center of the global environmental debate. If people begin to understand the risks to themselves and their children, they will be motivated to protect the world's environment," says Chivian.

On the Quad

Student Debt Relief

Driven by a charge from Dean Federman and fueled by a simultaneous lobby effort from HMS students, the Financial Aid Committee is bringing a surge of energy to tackling student indebtedness. Although the problem has been a priority since 1991 when an earlier task force was convened by Dean Tosteson to study the issue, "a confluence of factors," says Robert Dluhy '62, chair of the Financial Aid Committee, has moved the committee to go beyond present policies and "create a new initiative." These factors include a rapidly changing medical environment and a drop in physician earnings. "But mostly," notes Dluhy, "it is the difficulty students are having with this issue, both emotionally and financially."

In the spring of 1995 the Financial Aid Committee convened a long-term planning subcommittee to address the widening gap between the student financial aid budget and the cost of attending HMS, and between student indebtedness and declining physician salaries. They felt it was necessary to form this subcommittee, explains Theresa Orr, assistant dean and director for admissions and financial aid, because "It became more and more difficult to ration already rationed resources," making it necessary to "contribute to a long-range plan for increasing resources."

As the committee was putting together information for what has now become the "Financial Aid Committee Proposal for Student Debt Relief," a group of students from the Class of '98 was doing their own research. A questionnaire was developed to collect data on student attitudes about debt, which was administered to classes 1997 and 1998. Each class had an impressive 70 percent return rate.

The findings of this data collection were summarized in a December 1995 report entitled "Student Initiative for Financial Aid Reform." Sixty-nine percent of the respondents in the two classes reported that they anticipated a debt greater than $80,000. In the Class of 1997, 60 percent reported borrowing the total unit loan while 28 percent reported borrowing beyond the full unit loan. For the Class of 1998, the statistics were similar, with 58 percent borrowing the total unit loan and 36 percent borrowing beyond the full unit loan. The unit loan is the amount a student must borrow before being eligible for scholarship money. Thus, a student's financial need must be greater than the total unit loan amount in order to be eligible for scholarship funds. Of the four reform proposals offered to students in the survey, over 60 percent voted the reduction of the unit loan as their first choice.

Not surprisingly, the committee found the students' concerns compelling and proposed reducing the unit loan at the Faculty Council meeting in April. With the active support of Dean Tosteson, the proposal was approved by the council. Beginning with this year's incoming class through the year 2000, the unit loan will drop from $25,000 to $20,000.

Close to $1 million in additional scholarship availability is necessary per year for the next four years to make up the difference. To address this imminent need, the Harvard Corporation

Year	Median Physician Compensation	Median Physician Compensation Change from Previous Year	Boston C.P.I. Increase	Average Student Indebtedness	Percent of Average Indebtedness to Median Physician Compensation
1989	131,526	—	—	46,721	35.52%
1990	139,264	5.9%	6.1%	47,357	34.01%
1991	146,213	5.0%	6.9%	54,800	37.48%
1992	155,925	6.6%	4.0%	51,438	32.99%
1993	159,564	2.3%	4.4%	51,774	32.45%
1994	163,062	2.2%	1.7%	58,288	35.75%
1995	•150,000 (est.)	-8.0%(est.)	2.2%(est.)	66,231	44.15%

Source for 1989 through 1994 Physician Median Compensation: M.G.M.A. Physician Compensation and Production Survey: 1995 Report based on 1994 data

• *A.M.A.* indicates that the projected median physician compensation for *1994* would approximate $150,000; whereas *Medical Group Management Association* indicates that *1994* was $163,062. Further, *M.G.M.A.* provided information that the *projected 1995* physician would approximate *$150,000.*

Data for this table prepared by F. Katz, Katz, Baltimore & Co. P.C.

recently approved Dean Tosteson's proposal to decapitalize endowed funds to provide an immediate increase of scholarship resources. In addition, a close to $10 million gift designated for scholarship by James Stillman '32 will help with the reduction.

Like the students, the committee offered its own sobering numbers and statistics to document the severity of the problem. For example, the number of students who have graduated with over $80,000 in debt has jumped from 5 in 1989 to 43 in 1995. Meanwhile, physician salaries have declined for the first time in 14 years. Dluhy, an HMS associate professor, notes that the committee owes a "solid debt of gratitude" to Frederic Katz, CPA, who contributed his time pro bono to documenting declining MD income and its relationship to loan payments (see table on page 7).

"Fred Katz showed us that we can't ignore the warning signals. Launching students into a debt situation with dropping physician salaries will not be manageable," adds Dluhy.

Coupled with the restructuring of health care (read managed care), it can no longer be assumed that students will be able to repay their loans. And a statistic from the committee's proposal brings the point home: "a typical first-year resident owing $100,000 in student loans would have to allocate 58 percent of his/her monthly net (after-tax) income for loan payments, leaving only 42 percent ($937.00) for living and other consumer expenses." Not to mention the additional $54,900 (under the standard 10-year repayment plan, with 8.25 percent annual interest) that could accrue if they delay their payments.

The impact of this increasing debt on the rest of a graduate's life goes beyond dollars and cents. The student survey revealed that there was a small but significant correlation with how debt influenced choice of specialty and career path. And anecdotal comments from HMS graduates reveal that they postpone other things in their lives due to debt, such as buying a house or having children.

Beyond reducing indebtedness, the committee is working on a number of remaining issues and is considering the following long-term strategies:

- Establishing an approach that would enable students to refinance all their debt into one credit package to simplify debt management and loan repayment.
- Revising repayment terms for HMS loan programs by extending the repayment term from 10 to 20 years and eliminating accrual of interest during residency.
- Creating a low-income loan repayment plan for students who choose public service jobs with lower salaries, akin to the Harvard Law Schools's Low Income Protection Plan.

In addition to these strategies, it is hoped that money will be raised for student financial aid through the HMS campaign "The need to control the costs of medical education is a very active concern of the school's administration at this time," points out Dean Federman. "We are examining every possible strategy toward that goal. Nevertheless, fundraising is a crucial element in the support of medical education. We are lucky to have in Cush Robinson [the dean for resource development and public affairs] someone who is personally and enthusiastically committed to this goal."

An additional spark of energy for the debt proposal, says Dluhy, came from former chair of the Alumni Fund, A. Clifford Barger '43. He joined the committee as an observer, and shortly before his death, gave the proposal his blessing in a handwritten note to Dluhy: "If you can sell this to the Administration, the students will carry you on their shoulders around Tugo Circle, and I shall be there cheering them on."

Often, Orr hears students comment, "I don't think Harvard would give me a loan unless I could repay it." "Before now," Orr notes, "the Financial Aid Committee looked at a snapshot of the issue, but it is no longer ethical to be that shortsighted. The crisis for students is in the future, but for us, the crisis is now. We must see the economics of the future as our challenge for today."

Janet Walzer

President's Report

by Stephanie H. Pincus

The last meeting of the Alumni Council of the academic year was held on Wednesday, June 5, 1996. The most important issue discussed undoubtedly was the selection of the new dean of Harvard Medical School. Dean Daniel Tosteson '49 has been an effective leader whose major accomplishments have included substantially increasing the endowment of the medical school and implementing the New Pathway curriculum.

The Alumni Council reviewed in depth the challenges facing the new dean and the qualities that would be desirable. We all agreed that the next dean should have a good understanding of human biology in its broadest sense. There was considerable debate concerning whether the dean should be a "bench" scientist in the past tradition or should have expertise in newer areas, such as health policy or managed care. The critical challenges of providing quality education under increasing fiscal constraints will undoubtedly make the deanship a difficult and demanding position. Hence, an energetic leader who enjoys management will be necessary. We have communicated these ideas in writing to the president of the university and urge all alumni who are concerned to communicate directly to Neil Rudenstine, c/o Marc Goodheart, Special Assistant to the President, Massachusetts Hall, Harvard University, Cambridge, MA 02138.

Alumni Day on Friday, June 7 focused on ethics and professionalism under managed care. Dean Dan Federman '53 organized the marvelous symposium which is included in this issue. One of the most remarkable events of Alumni Day was unrelated to the topics. Women have finally reached their prominence in our organization, as illustrated by me as your outgoing president, your incoming president, Suzanne Fletcher '66, and the secretary, Nancy Rigotti '78, who were the main alumni representatives sitting on the stage.

This is my final column and I would like to thank all of you for the opportunity to serve as the president of the Harvard Medical Alumni Council. I have truly enjoyed and benefited from this experience and personally urge each of you to pitch in, return to the fold, and continue your alliance with Harvard Medical School.

Stephanie H. Pincus '68 is professor and chair of the Department of Dermatology at SUNY Buffalo.

Class Day

Class Day photos by Lionel Delevingne

WITH THE MASTERS OF THE SOCIETIES and the deans of the Faculty of Medicine leading the way, the Class of 1996 proceeded down the stairs of Building A for the last time as students. They were about to receive the honor they had worked so hard for—the privilege of adding MD after their names.

The waves from family and friends subsided and the students settled into the front rows of the tent. Co-moderator Donna-Marie Manasseh '96 encapsulated the pride all were feeling, citing the support they had received from family, friends and teachers and their excitement about what the future holds. Jeffrey Schnipper '96, the other co-moderator, then tried to answer the question most had been asked that day: What does it feel like to be graduating? "I have a range of emotions, such as, am I relaxing enough, do I keep or throw out my camels? I guess I really am in denial."

Joshua Sharfstein '96, who had just returned from Guatemala, was roundly applauded when he suggested that the class form a small country and apply to the World Bank for debt relief. After reading an imaginary headline from the *Wall Street Journal*—"Citing Budget Crunch, U.S. Hospitals Eliminate Residency Programs"—he used humor to comfort his classmates with the marketable skills they had learned at Harvard Medical School. Skills such as how to make lists or memorize thousands of bits of information "will no doubt serve us well in a wide range of careers, to name just a few… telephone operator, tax lawyer and traveling salesman."

Chih-Hung Jason Wang '96 humbly depicted the achievements of his classmates and admitted he was probably the only one who had not been to Guatemala that year. He also took a crack at speculating where they would go from here. "I want to urge you, my friends, that the unbending spirits that brought us to Harvard should not stop here. Together, we will be the architects of the future of

health care and more. We will continue to pass on the tradition of excellence, dedication and creativity."

Guest speaker Joseph E. Murray '43B was then introduced as a pioneer surgeon, researcher, mentor and philosopher. Murray, co-recipient of the 1990 Nobel Prize in Physiology or Medicine for his role in kidney transplantation, is professor emeritus of surgery at HMS, and for 34 years was chief of the Division of Plastic and Reconstructive Surgery at both Children's and the Brigham and Women's hospitals.

He weaved his "quilt of memories" from his days as a surgeon and expressed his concerns about the destruction of life at both the beginning and end of life. "The medical profession is the ultimate bulwark for society against any culture of death.... As physicians we can carry the candles of light by ministering to our patients and families, by teaching and learning along with our students, and by investigating the mysteries of nature."

The co-moderators honored faculty and friends of the Class of 1996. The teaching award for the preclinical years went to Steven E. Weinberger '73, associate professor of medicine, and for the clinical years to Martin A. Samuels, professor of neurology. A special award for "helping arrange international experiences and medical Spanish programs" was presented to Guillermo Herrera. The class also recognized the five masters of the societies (Ronald Arky, Daniel Goodenough, Michael Rosenblatt '73, Stephen Krane and Marian Neutra), the society program administrators (Chris Coughlin, Janet Lipponen, Patricia Cunningham, Elaine Glebus and Calvin Hennig), the student affairs coordinator, Carla Fujimoto, and associate dean for student affairs, Edward Hundert '84.

"Now to everyone's favorite part of the ceremony, the conferral of degrees," announced co-moderator Schnipper. The crowd whooped as the first group of graduates stood to be "robed" by the masters and then stepped across the dais for their degrees. Many came with their babies or children, who each received a teddy bear. There were so many offspring that the supply of bears ran out, prompting a quip from Dean Daniel Federman '53: "We underestimated your fertility; the curriculum must not be rigorous enough."

Dean Daniel Tosteson '49 began his valediction by having the class stand and applaud their families. He told them that clearly there was no way they could have mastered all that would be pertinent to their future work as physicians, but that they had begun to build a conceptual framework to learn new knowledge as it becomes available. "Your pathway of learning begins but not ends at HMS."

With the reading of the oath and one final cheer, the new Harvard doctors of the world were primed for the next stage of their careers.

Among the degree recipients were many who graduated with honors or special awards. They are:

Monica Subramanya Bettadapur, cum laude
An Investigation of Revascularization Within Prefabricated Free Flaps

Kingsley Richard Chin, cum laude
Investigating the Interaction Between Parathyroid Hormone and the Human Parathyroid Hormone-Related Protein Receptor

Timothy Lloyd Davis, cum laude
White Matter Tract Visualization By Diffusion Tensor MRI

Michael C. Dyce, cum laude
The Relationship Between Endothelial Vasodilator Function and LDL Particle Size, Density, and Number in Human Coronary Atherosclerosis

Anthony Carlyle Forster, magna cum laude
A Novel Method for Ligand and Drug Discovery

Jan O. Friedrich, magna cum laude
The Creatine Kinase System in Failing Myocardium: 31P NMR Magnetization Transfer and Spectroscopic Imaging Studies

Keri Kathleen Gardner, cum laude
Structural and Signaling Interactions Between the Platelet Cytoskeleton and Surface Receptors

Thomas Andrew Gaziano, cum laude
Light to Moderate Alcohol Consumption and Total Mortality in the Physician's Health Study Enrollment Cohort

Christopher M. Haqq, cum laude
Identification of MARE-1, a Mullerian Inhibiting Substance Activating Response Element

Vincent Trien-Vinh Ho, magna cum laude
Harold Lamport Biomedical Research Prize for the best paper reporting original research in the biomedical sciences: Regulation and Expression of the Human Erythropoietin Gene

Choll Wan Kim, cum laude
The Syndecan Family of Matrix and Growth Factor Co-Receptors Is Expressed Selectively in Mouse Tissue, Cultured Cells, and During Wound Repair

Laura Ann Lambert, cum laude
Irreversible Conduction Block in Isolated Frog Sciatic Nerve by High Concentrations of Local Anesthetics

Patrick Joseph Ledden, cum laude
Physiological Measurement with a Radio Frequency Loop: A Novel Biologic Sensor

Laura Mauri, magna cum laude
An Analysis of Tissue Plasminogen Activator Binding to Annexin II, Its Endothelial Cell Receptor

The helpful hands behind Jeffrey Schnipper

Jennifer Hirsch and her daughter "cell"-ebrate commencement.

Margaret Elise McLaughlin, magna cum laude
Henry Asbury Christian Award for notable scholarship in studies or research: Mutations in the Gene Encoding the Beta Subunit of Rod cGMP Phosphodiesterase in Patients With Autosomal Recessive Retinitis Pigmentosa

David Joseph Milan, cum laude
The Molecular Mechanism of Immunosuppression by Cyclosporin A and FK506

Jeff Allen Odiet, magna cum laude
Influence of Age and Inhibition on Cardiac Carnitine Palmitoyl Transferase-I

Emily Oken, cum laude
Immunoneuroendocrine Response to Tetanus Toxoid. Bemy Jelin '91 Prize to that senior who most demonstrates overall academic excellence with a career interest in pediatrics, oncology, international health, or psychiatry

Arun J. Ramappa, cum laude
A Novel Implant for Articular Cartilage Regeneration

Manish Arvind Shah, magna cum laude
The Function of Neuron Specific Kinesin Heavy Chain as Assessed by Antisense Technology

Wendy Jennifer Spangler, cum laude
Dr. Sirgay Sanger Award for excellence and accomplishment in research, clinical investigation or scholarship in psychiatry: Stereotactic Cingulotomy for Intractable Psychiatric Disease

Kimberly Stegmaier, magna cum laude
Leon Reznick Memorial Prize for excellence and accomplishment in research: Involvement of the TEL Gene in Acute Lymphoblastic Leukemia of Childhood

Erich Christian Strauss, magna cum laude
Molecular Mechanisms Controlling GATA-1 Gene Expression and Globin Locus Control Region Function in Erythroid Cells

Howard Lawrence West, magna cum laude
Clinical and Neuropathological Correlates of Apolipoprotein E Genotype Subgroups Within the Alzheimer's Disease Patient Population

Tadeus John Wieczorek, cum laude
Response Modulated Excitation With Applications

Stephen Daniel Wiviott, cum laude
Inhibition of Endogenous Nitric Oxide Signaling in Adult Rat Ventricular Myocytes Increases Contractile Function in a Calcium-Independent Manner

Deborah Lee Cohan and Joshua Moses Sharfstein
The Community Service Award to the seniors who have done the most to exemplify and/or promote the spirit and practice of community service

Eleanor Ann Drey, Emily Oken and Joshua Moses Sharfstein
Robert H. Ebert Prize for excellence and outstanding accomplishments in the field of primary care medicine

Andrew Jeffrey Greenspan
Kurt Isselbacher Prize to the senior demonstrating humanitarian values and dedication to science

Naomi Nichele Duke, Andrew Jeffrey Greenspan and Brent Oliver Hale
The Multiculturalism and Diversity Award: to the seniors who have done the most to exemplify and/or promote the spirit and practice of multiculturalism and diversity

Beth Ellen Ebel
The New England Pediatric Society Prize to the senior who in the opinion of peers and faculty best exemplifies those qualities one looks for in a pediatrician

Joshua Moses Sharfstein
Rose Seegal Prize for the best paper on the relation of the medical profession to the community: Campaign Contributions From the American Medical Political Action Committee to Members of Congress

Theodore Tsomides
James Tolbert Shipley Prize for excellence and accomplishment in research: Anti-Melanoma Cytotoxic T Lymphocytes (CTL) Recognize Numerous Antigenic Peptides Having 'Self' Sequences: Autoimmune Nature of the Anti-Melanoma CTL Response

Patricia Lee

The Joy and Solace of Surgery

by Joseph E. Murray

A quilt of memories

BEING WITH YOU AT THIS UNIQUE time in your lives is unquestionably the high point of my professional year. HMS has influenced my life for over 70 years. As a young boy I would frequently ride with my dad along Longwood Avenue. Looking across the Quadrangle flanked by these marble buildings, I intuitively knew that this is where I wanted to go to medical school.

I selected this title because although joy and solace can of course emerge from other disciplines, I am a surgeon. From earliest childhood I knew I would be a surgeon. There were no physicians on either side of my family. But perhaps I was influenced by our family doctor whose very presence during our childhood illnesses brought an almost miraculous sense of caring and security into our home.

Fifty-six years ago, in September 1940, I first arrived at Vanderbilt Hall. My four years at HMS were all that I dreamed they would be. Classmates and faculty were stimulating and friendly. Hospitals were filled with varieties of patients. Although the hours of study and hospital duty were long, life was rich and full. Symphony Hall and Gardner Museum were within walking distance, squash courts were available for daily exercise, our singing group met weekly in the club dining room. Weekend bicycle trips (wartime gas rationing was in effect) and club dances added to the variety of activities. As I commented in a brief preamble to my Nobel address, "It was heaven!"

Each of you will follow your own dream, within or outside of medicine. As physicians, we have a glorious heritage and mission for life—a combination of the best of humanity and the best of science. My lifetime in surgery has created an elegant spiritual tapestry—of patients and their families, medical and nursing colleagues, students and residents, senior investigators and research fellows, social workers and administrators—all woven together in a marvelous quilt of memories.

During World War II, medical school courses and residencies were accelerated. Our Class Day was celebrated in the Vanderbilt gym on December 31, 1943. President Conant was our speaker. Our entire class was in military uniform, we in the army as privates, those in the navy as officers! (We army guys drilled early every morning in the Vanderbilt parking lot, while our navy classmates hooted at us from their windows.)

My surgical "interneship" at the Brigham (then known as the Peter Bent Brigham Hospital) started on January 1, 1944, the day after graduation. Surgery has grown phenomenally since then. At that time, most operations were excisional, for example, amputations, appendectomy, cholecystectomy, hysterectomy. My internship was only nine months long.

At Valley Forge General Hospital in Pennsylvania, a plastic surgical center to which I was randomly assigned for my first military duty, we treated battle casualties from the European, African and Pacific theaters. I reveled in the technical challenges of reconstructive surgery, imaginatively restoring noses, ears and eyelids, rebuilding arms, hands and legs, resurfacing severe burns, while at the same time trying to restore the morale of these severely damaged soldiers.

Four hundred years ago the father of plastic surgery, Gaspare Tagliacozzi of Bologna, noted the psychological benefits of reconstructive surgery: "We repair those defects that nature and ill fortune have taken away, not so much that they improve the appearance, but that they restore the spirit of the afflicted." Paradoxically, it took the ugliness of war for me to appreciate the intrinsic value of cosmetic surgery.

After three years in the military, I returned to the Brigham and Children's hospitals in November 1947 to complete my surgical residency. At the Brigham I was attracted to the kidney transplant program under George W. Thorn and Francis D. Moore '39, two of the most creative and productive clinical scientists of

this century. Conceptually, transplantation seemed an extension of reconstructive surgery: 'If you can't fix it replace it'.

In this current decade, another category of surgery is evolving, inductive surgery. Mechanically induced skin expansion and elongation of bones are physiological techniques now available to treat congenital, traumatic and neoplastic conditions. The increasing knowledge of growth factors, adhesion molecules and genetic homeoboxes may lead to the production of new tissues and organs for reconstruction and transplantation. The possibilities are limited only by our imagination.

I have operated on hundreds of patients on all six continents. These include patients with military, vehicular and industrial trauma, children and adults with head and neck neoplasms, severe thermal burns, extensive birth defects, and patients dying of kidney failure. I welcomed surgical challenges; "Difficulties are opportunities" is a slogan I learned from my leprosy patients in India. In all my years and experiences I have never found any reason to alter my basic motives for becoming a doctor: to prevent and treat disease, to relieve pain, and to do no harm. I did not become a doctor to hasten death or to prolong suffering.

As one involved in human transplantation from its beginning, I have participated in many conferences on ethics. Our successful human kidney transplants in the early 1960s created the need to formulate "a definition of death" based on cessation of brain function (Henry K. Beecher chaired the committee). The concept of brain death as we define it now extends far beyond transplantation and is used with modifications in emergency units and intensive care wards worldwide.

Physician assisted suicide is a current topic of popular discussion. Last week an ethicist from the Netherlands told me of a backlash developing in his country from the use of physician assisted suicide by hospitals and physicians. Patients are losing trust in the medical profession and fear that decisions about their lives may be based more on economic rather than medical indications. This is one of the saddest commentaries about our profession that I can imagine.

A recent speaker here at Harvard noted that the support for physician assisted suicide often arises because of inadequacies within the medical profession—failure to control pain, or insufficient social support for the patient and family. I agreed with her analysis, but not with her conclusions. In my opinion, the proper solution is better education and more compassionate involvement of the physician, not the killing of the patient.

An example of compassionate care is an episode that occurred at the Brigham 30 or 40 years ago during early morning rounds with the late J. Englebert Dunphy '33.* Feeling pressed for time, Dunphy's resident suggested that they skip seeing a certain patient that morning because nothing had changed in the previous 24 hours, and besides, the patient had incurable cancer. Dunphy stopped, put his arm gently over the resident's shoulder, and quietly said, "I cure him every morning."

My decisions about the beginning and end of life reflect the spirit of Albert Schweitzer—physician, theologian, musician—who summed up his

Dean Tosteson greets Neal Baer and son; Ed Hundert waits to hand over his degree.

A Collage of Talents

Who are the people behind the faces of the Class of 1996? "They are a marvelously eclectic group of talented individuals," says Edward Hundert '84, who as associate dean for student affairs has come to know every one of them.

Out of 158 students graduating, only 80 took the typical four years to complete their medical studies. More and more students are taking longer to graduate to pursue other degrees, research, community or overseas experiences, or personal leaves. Another trend is the accep-

Castle Society master, Marian Neutra, congratulates Deborah Cohen

philosophy in three words: reverence for life. When my own patients reached the end of the road and were just hanging onto life after all treatments had failed, I would reassure them and their families that pain will be effectively treated, open sores cleansed, and the patient allowed to die with dignity. We have no control over the moment of our birth; neither, in my opinion, should we decide the moment for death. The Lord's Prayer takes precedence, "Thy will be done."

Just as physicians should be compassionate, we must at the same time comply with the rigors of science. The clinical scientist plays an essential role in the progress of medical care. In our practices we can detect problems demanding solutions. Although one can rarely, if ever, be both an expert clinician and a skilled bench scientist, a motivated clinician can, with extra effort, learn and use the elements of related laboratory disciplines. The role of an MD vis-à-vis PhD in research is determined by the individual. With realistic priorities and teamwork, he or she can be productive in both basic and applied science. As Pasteur wrote, "There is only one science."

Transplantation biology is a paradigm for the melding of clinical skill with basic science. Organ transplantation developed because we clinicians needed better treatment for end-stage renal disease. The motivation was relentless; large numbers of patients, usually young and otherwise healthy, were dying. We could not afford to wait for the bench scientists to solve the problem. But we clinicians could not do it alone. Sound solid experimentation requires knowing the fundamentals of other disciplines—immunology, zoology, genetics, biochemistry, veterinary medicine, among others.

Service to society is the ultimate reason for the existence of the medical

tance of more older students who have had other careers before medicine. The stories of what students do with their year off and what they have done before arriving here are as diverse as the class.

This year there was a surge in the number (ten) of students selecting emergency medicine as a specialty (a national trend as well), and the television show E.R., and thus Neal Baer '96, must share some of the credit. He took a year off after third year to be one of six scriptwriters for the show and was responsible for developing medical stories, advising other writers on the medical aspects of their script, and writing his own scripts. (The pilot script for the show was written by Michael Crichton '69.) Baer has a master's in education, a master's in sociology, and had developed his interest in screenwriting while on a fellowship at the American Film Institute in Los Angeles. He had already done some writing for films and a television pilot before coming to HMS, where in his spare time he directed a Boston outreach program in the public schools and did some research on the cell cycle at Children's. It is pediatrics and not emergency medicine, however, that Baer sets his sights on.

Judith Edersheim '96 graduated from Harvard Law School in 1985 cum laude, with an interest in the underlying assumptions about the nature of human rationality and the relationship of logical arguments to emotions and prejudice. As she began the practice of law, she became interested in medicine and volunteered legal services at the Family Center, an outpatient mental health center. Deciding that she wished to leave "the often artificial abstraction of law for the immediacy and importance of medicine," she took premed courses at Wellesley College and was admitted to HMS in 1991. (She took a year off after first year to be with her infant son.) She is now training in psychiatry at Cambridge Hospital in Massachusetts.

After graduating magna cum laude from Williams College, where she was captain of the women's ice hockey team, Beth Ebel '96 was selected as a Rhodes Scholar and spent three years at Oxford. She was conferred a master's of science in developmental economics, writing her thesis on the impact of food subsidies on poverty in the Sudan, and received a commendation for overall highest marks. After a job with the United Nations Development Program in New York, Ebel coordinated a study of options for financing health care in developing countries for UNICEF for two years. For a year before starting at HMS in the HST Division, she was the socioeconomic advisor for

profession. The clinical scientist serves society by acting as a two-way bridge between bed and bench. Everyone benefits, especially patients. An effective clinical scientist must be a team player and have only three qualities: curiosity, imagination and persistence. Curiosity about how nature works, imagination to detect a nexus between seemingly unrelated observations, and persistence in face of disappointment.

When I spoke at HMS commencement five years ago, my title was from Browning, "The Best Is Yet To Be." This applies even more so today. You are graduating at the best time in history for the effective care of patients. Cellular and molecular biology, genetics, tissue induction and surgical techniques have progressed rapidly. I have not operated now for ten years, and I readily admit that some of today's procedures have advanced far beyond me.

Before I conclude, I wish to emphasize that I am well aware of the heavy financial burdens most of you have accumulated during your years of education. This is probably the most critical problem in medical education today. In addition, you face the worri-

Kingsley Chin

some influence of managed care and its effect on your treatment of patients. But it would be counterproductive to allow these ephemeral problems to insulate you from the warmth and richness to be experienced in our profession. Every decade has its problems. Ours was World War II; some of our group never did return, others had careers aborted. No matter what, our ideals can remain immutable.

I will conclude with personal reflections about which I feel strongly. But I hasten to add that I am sensitive to and respect those with differing opinions. A philosophy of death seems to be creeping into society. Like everyone else, I am appalled by the meaningless destruction of human life seen and reported daily in the media.

UNICEF in Quito, Ecuador, where she worked to improve access to health care. Ebel was the founder, coach and star of the HST Blades, an HMS/MIT ice hockey team. She plans to continue her career in international health after a residency in pediatrics at Johns Hopkins.

After escaping with his family from war-torn Vietnam in a boat, Vincent Trien-Vinh Ho '96 spent a year in a Malaysian refugee camp, where—exposed to hardships and atrocities—he determined he would go into medicine someday. At Boston Latin, he placed first in the Massachusetts State Science Fair and was tournament champion in table tennis his senior year. At Harvard, he taught and directed an English as a second language program for refugee teenagers and senior year, working in the laboratory of Alan D'Andrea at the Dana-Farber Cancer Institute, isolated an important mutant of an oncoprotein that causes murine erythroleukemia. Through a public service fellowship, he took a year off before medical school to teach English to refugees at a camp in the Philippines. He's now a resident in internal medicine at Brigham and Women's Hospital.

Manish Bhandari '96 has distinguished himself both as a scholar and as a humanitarian. He grew up in India and spent his summer vacations in high school working with Mother Teresa in Calcutta. While garnering a range of prizes and awards in molecular and cell biology at University of California, Berkeley, he also ran Berkeley's student tutoring program and was a Red Cross Relief worker after the Bay Area earthquake in 1989. After first year at HMS, he traveled to the Kanti Children's Hospital in Nepal on a Paul Dudley White Fellowship. Stirred by the hospital's lack of basic resources—sutures, syringes and latex gloves—Ghandari established a nonprofit organization, Resources International, to collect and disperse to the Third World spare supplies and equipment from Boston-area hospitals. He held off a year to graduate so he and his wife, Shalini Gupta '96, could participate in the couples match this year. He is a resident in internal medicine at Brown, where Gupta is in plastic surgery.

Ellen Barlow

Worldwide nationalistic, religious, political and tribal mass destructions are commonplace. I am staggered by the fact that over one and a half million normal fetuses are destroyed annually in the United States. Destruction of life at both its beginning and end is becoming mainstream. We know from sad experience how easily governments, tribes, gangs, and even young children can justify killing.

The medical profession is the ultimate bulwark for society against any culture of death. I am optimistic that future knowledge and understanding will at least partially help to blunt cultural and spiritual differences. We know that it is "better to light a candle than to curse the darkness." As physicians we can carry the candles of light by ministering to our patients and families, by teaching and learning along with our students, and by investigating the mysteries of nature.

My own life's journey has been guided by Schweitzer's motto "reverence for life," the Hippocratic Oath, and Harvard Medical School, which for me has been a perpetual Fountain of Youth.

Joseph E. Murray '43B is professor of surgery emeritus at Harvard Medical School, and for 34 years was chief of the Division of Plastic and Reconstructive Surgery at both the Brigham and Women's and Children's hospitals. He was a co-recipient of the 1990 Nobel Prize in Physiology or Medicine.

**J. Englebert Dunphy '33 was David Cheever Professor of Surgery and surgeon-in-chief of the Harvard Service at Boston City Hospital, and was a president of the Harvard Medical School Alumni Association. For years a copy of Dunphy's 1976 oration to Massachusetts Medical Society, "On Caring for the Patient with Cancer," was given to each HMS graduate along with Francis Peabody's "Caring for the Patient."*

Joshua Sharfstein

Prepared for the Future

by Joshua Sharfstein

The party is over and it's time to get a job!

COMMENCEMENT IS A WONDERFUL occasion—but let's face it, in a few hours the party will be over. This tent will come down, these chairs will be put away, Dean Hundert will have to put his clothes back on... and then what?

If you are thinking, and then we go on to residency and become practicing physicians, I've got news for you. I have today's *Wall Street Journal* and I'm going to read you a headline: "Looking for an Easier Job, Harvard's Dean Tosteson to Seek Russian Presidency." I'm sorry—that's not the headline I meant to read. Here it is: "Citing Budget Crunch, U.S. Hospitals Eliminate Residency Programs."

That's right: we all need jobs. So I don't think this is an entirely inappropriate time to consider the difficult question, "What have we really learned at HMS that will help us in the future?"

I started thinking about this question by making a list and reading it over and over again. And I realized that the first thing we've learned here is how to make a list and read it over and over again. That's the key to constructing a complete differential diagnosis. And while we may have been bored at the time, let us recognize that familiarity with lists is a marketable skill that will serve us well in a wide variety of positions, such as telephone operator, tax lawyer and traveling salesperson.

We have also learned to memorize. Over the last four years, we have each memorized thousands of pieces of information, from irrelevant trivia, such as the percentage of people who do not naturally have a palmaris longus muscle, to essential facts, such as the person on call the first Friday of a month-long Q4 rotation gets no golden weekend. Perhaps most telling, I've memorized all nine diagnostic criteria for obsessive compulsive personality disorder. No doubt, these memorizing abilities will serve us well in a wide range of careers, to name just a few: telephone operator, tax lawyer and traveling salesperson.

In addition to the nerdy, cerebral skills of list-making and memorization, we have not been afraid to get our hands dirty at HMS. Recall for a moment the times we woke up early to retract in surgery, the times our dental colleagues worked late in clinic pulling teeth, and the times that we retracted in surgery for so long that it felt like our dental colleagues were right there with us, pulling our teeth. Fortunately, manual skills will help us as telephone operators, tax lawyers and traveling salespeople.

Earlier I asked,"What have we really learned at HMS?" You may be mad because in response to that difficult question, I've just offered implausible answers and waved my hands—but that's another thing I've picked up at HMS.

Of course, Harvard has prepared us for far more than these three careers. For example, after our third year on call every third or fourth night, we are well equipped for many jobs, such as overnight camp counselors, nighttime security guards and 24-hour convenience store managers.

But that is just the beginning. Using our knowledge of surgical scrubbing and sterile technique, the Class of 1996 could create a national chain of delicatessens dedicated to new

Venkatesh Raman, Arun Jogi and Edward Machtinger

standards of cleanliness and hygiene. Admittedly, it would take 45 minutes to make a turkey sandwich. Here's another idea: We could form a small country, pool our student loans, and apply to the International Monetary Fund and World Bank for debt relief.

For such a scheme to work, we'd need friends in high places. The good news is that Harvard has prepared us well for politics. Good politicians know that the relationship between elected representative and voter is a two-way street. Similarly, we have learned that the doctor/patient relationship is a two-way street, and to be effective physicians we can take nothing for granted in that relationship.

A joke my grandfather told me last night really makes this point well. A man has a skiing accident and winds up at an orthopedist's office. The doctor removes his ski boot and sock and finds the dirtiest foot she's ever seen. Absolutely filthy. "Haven't you ever been to the doctor before?" the doctor asks. "Of course," the patient says. "Hasn't the doctor ever told you to wash your feet?" "Sure," the patient says. "So why haven't you?" the doctor asks. The patient laughs and says: "Go believe in one doctor!"

Earlier today, I broke the news to my family that we all needed jobs and asked for suggestions. My father said that with our sense of duty, we could become police officers. My grandmother said that with our sense of responsibility, we could become judges. And my mother said that with our sense of entitlement, we could become royalty. Thanks, mom.

Speaking of royalty, it is no secret that some of us here hope to become health care executives, something we have been well prepared for at Harvard. I mean, any school that prepares its graduates to become telephone operators, tax lawyers and traveling salespeople almost by definition trains its graduates to become modern health care executives.

Given the broad preparation we have received for the future at HMS, what is the single most useful thing we have learned? I discovered the answer several months ago, when I called my grandfather in a Florida hospital, where he had been admitted for cardiac observation. "Josh," he said, "Something is terribly wrong. I can't stand it any longer." "What's the matter?" I asked. When he told me, I was both panicked and confident. Panicked because I knew immediately how serious the problem was, and confident because I had learned the solution on the wards at HMS.

"Grandpa, I want you to do exactly as I tell you," I said. "Find the channel changer button. Keep it pushed, you'll cycle through a few stations and the TV will turn off." After a brief pause, I heard, "I'll be damned. I've been trying to get this thing off for an hour. There's no on-and-off switch! Now I can finally get some sleep." I'm proud to report that all of my grandparents are here with me today.

I'll also admit that I lied at the beginning of my speech. No residency programs have been cancelled; we will indeed become practicing physicians. Actually, this second newspaper headline here reads "Seeking a Challenge, Russian President Boris Yeltsin to Become Next Dean of HMS." But at least we know, that no matter what the future of medicine holds, we will be prepared for it, thanks to HMS.

Joshua Sharfstein '96 is an intern in pediatrics in the combined residency program at Boston City Hospital and Boston's Children's Hospital.

On the Way Out of Harvard

by Chih-Hung Jason Wang

There's nothing we can't do

I REMEMBER MY FIRST DAY AT HMS, WE had to introduce ourselves in our tutorial. Shawn, sitting on my right, had raised two kids and went to school at the same time. Choll, next to him, already had a PhD. Clark was this 18-year-old who used to work for Choll, but instead of starting college, joined him in the same medical school class. Jeremy had spent a year at the Wharton Business School. Gillian had worked in a women's clinic. Lydia came from "T.C." or "the college." It took me awhile to figure out which college!

If you looked from group to group during that first year, you would find experts in law, business, the military and even professional football. The admissions office really did an amazing job in recruiting students from nearly every professional organization in this country.

I remember thinking to myself, I must be the least interesting person in my class. It's been almost four years, and I still feel that way. I continue to be humbled by my classmates and the things they do.

The hidden talents of these HMSers started to emerge long before the society olympics and second year show. Our HMS soccer team "kicked some butt" when they competed against other graduate schools. People who used to spend hours in the basements of labs were now singing with the "Countway Basies" and the "Barr Bodies."

We had classmates working on urban health projects and those who went to Africa and India. In fact, I think I was probably the only person who didn't go to Guatemala this year.

With so much talent around HMS, the question: Where do we go from here?

I was slightly disappointed by a cover of the *Harvard Medical Alumni Bulletin*, which suggested that the answer to that question is already determined, that our future is spelled out: we are all going to work for HMOs. I don't think this issue is settled. Perhaps we will all work for HMOs, but we will do so only if we agree that it is the best way to provide health care.

There are others who worry that research funding at NIH is drying up. Perhaps it has become more difficult to get funding, but it is now that creativity becomes important. We will find new ways to fund research, from industry and other nongovernmental agencies, and by expanding new health markets abroad. In the meantime, we will use our resources more carefully by setting priorities in research.

I want to urge you, my friends, that the unbending spirits that brought us to Harvard should not stop here. Together, we will be the architects of the future of health care and more. We will continue to pass on the tradition of excellence, dedication and creativity.

So, fellow classmates, when people ask you, "What can you do now that you are graduating from HMS," look around as I have so often done. Look around at Clark and Shawn and Choll. Look at the person to your left and your right. You will answer as I do: There is nothing we cannot do.

Chih-Hung Jason Wang '96 is the author of the 1995 best-selling Chinese nonfiction book On the Way to Harvard: Experiences of an Immigrant Student in America.

Alumni Day

On a sunny cloudless day alumni from across the country gathered to participate in the festivities of reunion week. The lively spirit of Alumni Day was felt on the Quad and in the halls of Building A as alumni swapped updates and remembered earlier times.

Dean Daniel Federman '53, director of alumni relations, warmly welcomed everyone before the start of the business meeting. Reunion gifts were presented to Dean Daniel Tosteson '49 by agents for the 25th and 50th classes. Ann Stark and Frank Berson took charge of the Class of 1971's gift, with Stark recalling the Tom Hanks character from the movie *Big* as she commented, "It's hard to believe our class is comprised of grown-ups!" John Braasch presented the Class of 1946's gift, noting that not only did his class produce two Nobel Prize winners, but equally remarkably, one alumnus who was currently on his honeymoon.

The torch was then passed from outgoing Alumni Council president Stephanie Pincus '68 to her successor Suzanne Fletcher '66, signalling the end of the business meeting.

This year's symposium, "Ethics and Professionalism Under Managed Care," was moderated by Dean Federman. Noting that the field of medicine is known for its revolutions, including the advent of antibiotics and Medicaid, Federman distinguished between revolutions of old and the most recent revolution—managed care. Whereas in the past physicians have been the leaders in instituting changes in the medical field, changes taking place today are originating from those outside the field—insurance companies, the government and other nonmedical bodies.

With that said, Federman ended with a quote by Shakespeare, "Things are neither good nor bad but thinking makes them so," and invited alumni to follow the New Pathway model and engage in discussion after the speeches.

Nina Tolkoff-Rubin '68, director of hemodialysis and CAPD at MGH, invoked the early forefathers of medicine, Hippocrates and Aesculapius, and challenged her fellow alumni to develop new paradigms in the face of economic change. Tolkoff-Rubin, HMS associate professor of medicine, encouraged the medical community, as the "children" of these teachers, to integrate both their intellectual and their moral lessons.

Associate HMS clinical professor of psychiatry James Sabin '64 took on Dean Federman's assignment to "be amusing, not cite any references, and say something personal" in relation to ethical decision-making in a managed care environment. Sabin, associate director for teaching programs at

Alumni Day photos by Larry Lawfer

Harvard Community Health Plan, reflected on his more than 20 years as a practicing psychiatrist at HCHP, founded by Dean Robert Ebert and now called Harvard Pilgrim Health Care. Sabin confessed that rather than spending time on major ethical issues, such as resource allocation, he spends more of his time on how to manage his time. After all, he said, he is essentially responsible for the whole HMO population, not just his current patients. Sabin emphasized the importance of the doctor/patient relationship and dealing openly with the patient about the constraints imposed by a managed care setting.

Sabin's belief that doctors and patients need to work together prompted a variety of comments from the audience, particularly from those in the field of psychiatry.

John Appel '36 was the first of several members of the psychiatric community to take their place in front of the microphone, wondering how clinicians should go about allocating their time and effort to patients in therapy in the context of the current climate.

The dilemma of balancing the costs of therapeutic drugs with good patient care was introduced by John Hamilton '71. Hamilton bemoaned the complexity of decision-making when trying to be attentive to a health plan's limitations while doing what's best for the patient. Another therapist in the audience noted that she had avoided difficult decisions about whom to see by choosing only those patients she liked, wondering now if that practice was "ethical."

Bruce Sams '55 called for doctors to make a difference in the arena of managed care by finding ways to exert control. All were reminded by Joe Foley '41 that medical care is a right and not a privilege. Foley hoped those present could resist transforming a moral issue into an economic one.

The question and answer period before the break was poignantly ended by second-year student Maisha Draves who came out to the symposium as a breather from studying for her Boards. She lamented the schism growing between her tuition costs and her potential to pay these bills in a capitated environment: "We have to pay so much to become doctors. Now our salaries will be capped and limits put on our practices. We are so frightened, wondering why it is we came into medicine."

At that point, Federman took the opportunity to announce the development of a new HMS course, the "Clinical Commons," which, among other issues, will address student debt. Also noted was the Alumni Fund's decision to continue to focus on student debt in the year ahead.

All were admonished to take no more than 15 minutes to stretch their legs and grab a snack as there was much more to come. Fortified by refreshments and lively conversation, alumni then returned for the second part of the symposium.

In his introductory comments Kenneth Shine '61 reflected that he was one of the first pair of students Dean Federman supervised as an attending. Shine, president of the Institute of Medicine, National Academy of Sciences, offered his forecast of what was to come in the world of health care, including an increasing amount of regulation by the states. Adding to the many comments about how doctors and patients should work together and who should exert control, Shine stated that the goal of doctor control was self defeating, and instead advocated for doctor/patient collaboration in the next decade. He also urged doctors to form alliances with their patients at both the community and state levels to monitor quality of care.

Straying from recent tradition, the last speech was given by an intern rather than a medical student. Joshua Hauser, an intern in medicine at Brigham and Women's, spent a year studying ethics in the Division of Medical Ethics at HMS before beginning his internship. Hauser spoke about the challenges he and other interns face daily to retain their empathy with patients. He implored his colleagues to go beyond the traditional questions when taking a history and personally explore who is sitting in front of them.

With that injunction, it was time for more comments and questions. Peter Liebert '61 observed that doctors need to educate their patients about managed care, while recent graduate Anna Birkenblit '96 suggested medical students should know about quality assurance tools in order to deal with what's to come in the future.

Dean Federman summarized that everything touched on during the symposium and discussion periods was really at the core of the patient/doctor relationship. Federman also had some words of advice for the various constituencies in the audience who might want to continue this discussion: "If you're an intern, go to sleep. If you're a young alum, find us [the alumni association] on the World Wide Web. If you're an older alum, ask your grandchild to find the Web. And if you're older than that just stay well and come back to the next reunion!"

The morning was topped off by Dean Tosteson's report on the events of the past year. Noting that this was the 106th anniversary of the Alumni Council, Tosteson provided an update on the faculty: 54 individuals became full professors, bringing the total to 475 of 13,000 faculty appointments.

In 1996 158 MDs graduated, 23 with combined degrees and 26 with honors. The class of 2000 attracted 4,500 applicants; of the 165 accepted, 23 percent are members of a minority group, up from last year's 16 percent, and 55 percent are women.

Two emeritus faculty who passed away in the last year, Robert Ebert and Cliff Barger '43A, were acknowledged in a moment of silence. Tosteson then reviewed new appointments and some HMS creations in the past year, such as the Division of Emergency Medicine

Collins Lewis '71, Ann Stark '71 and fellow alumni.

and the course "Clinical Commons." This course reflects the restructuring of the first six months of the Patient-Doctor III course, which should give students more experience in the ambulatory care setting. Each student will do a third month of medicine and a third month of surgery in an ambulatory care setting.

The Faculty Council approved a reduction in the unit loan from $25,000 to $20,000, effective with the incoming class. This was made possible by a gift designated for scholarship by James Stillman '32 of close to $10 million. The goal is to raise enough funds to reduce the unit loan to $15,000 over the next five years. In addition, the medical school has raised $171.7 million, closing in on its $220 million goal for the university campaign.

And lastly, Dean Tosteson read his letter to President Rudenstine in which he states his intention to step down as dean in 1997.

The Unsteady State of Health Care

by Kenneth I. Shine

Meaningful alliances are critical to the outcome

SYSTEMIC, COMPREHENSIVE FEDERAL reform of the American health care system is not on the horizon for the foreseeable future. The federal government will have a role to play in the next several years, however. That role primarily will be to produce incremental changes in Medicare/Medicaid and in care for some special populations, and to rationalize state regulation of the health care enterprise. The most important changes will continue to take place in various states, but the federal obligation will be to rationalize these changes, assure the comparability of information and, ultimately, resolve conflicts produced by state lines.

In this context, I would like to suggest the critical role of well-informed joint patient/doctor decision-making as the central theme around which the role of the health professions and quality of health care ought to be centered.

Substantial change in the 1980s nonsystem we called "health care" was inevitable. The historical fee-for-service practice of medicine rewarded overutilization, redundancy and until recently, used science and technology in practice, but paid little attention to practicing in any scientific way. We developed enormous excesses in capacity, with twice as many hospital beds as needed for many parts of the country. We educated too many physicians and made too little use of integrated teams of health care providers.

While almost every other segment of the economy used technology in improving the efficiency with which it functioned, the medical profession and health care institutions were unable or unwilling to do so. We talked about quality, but did not engage in continuous quality improvement in any concerted way.

The movement toward controlling health care costs by employers began before the Clinton attempt at health

care reform and had reached significant stages of development in California, Minnesota, Oregon and Arizona. Although few of us would organize an employer-based health care system if we were creating it anew, there are powerful forces that will maintain employer-based health coverage as a central theme in our society.

Although many of us would favor a single-payer health care system, possibly including the expansion of Medicare, I believe we will not see a serious consideration of this approach for another decade, if ever. It is worth reminding those who look wistfully toward our Canadian neighbors, where the proportion of gross domestic product (GDP) expended for health care has diminished from about 10.2 percent to 9.2 percent, that the Canadian system is a provincial system with health plans varying significantly from one province to another. The proportionate federal contribution to health care is significantly smaller than the federal contribution in the United States.

Moreover, the same kinds of painful consolidations taking place in this country are occurring there, apace with an increasingly unhappy medical profession that once looked south of the border for professional opportunities to escape that system. I recently attended the annual meeting of the Ontario Medical Association in which the anger, unhappiness and distrust were extraordinarily overt, and physicians were greatly frustrated that the physician surplus in the United States was significantly limiting their options.

Kenneth Shine and Daniel Federman

It is clear that in the United States we must manage health care. We must understand what we do, how we do it, and what the results of those actions are. We must find ways in which technology does not simply add to costs but in fact controls their rate of growth. The movement toward con-

Symposiac Moments of the Class of 1971

Gene-based diagnostics and the impact of violence were the hot topics of the day at the Class of 1971's symposium on June 6. While molecular genetics has become a familiar if controversial part of the medical tapestry, it was only a budding science when this class graduated 25 years ago. Stuart Orkin '71, Leland Fikes Professor of Pediatric Medicine at HMS, equated the intellectual revolution in genetics and its application in the seventies and eighties to the blossoming of physics in the early 1900s. The first great success in genetics was the prenatal diagnosis of thalassemia, which can cause fatal anemia. The science of molecular genetics is now well established in the clinic and there are genetics tests for over 200 diseases.

Roberta Pagon '71, professor of pediatrics at the University of Washington School of Medicine, is directing the development of two information systems to help busy medical practitioners wade through the overwhelming number of genetics tests now available. The first, Helix, is a national directory of DNA diagnostic laboratories, in which the physician can look up information by phone, fax and the Internet. The second is Genline, which provides a discussion forum for a number of issues surrounding these tests, including their quality.

The second part of the morning's symposium was devoted to the impact of violence. Moderator Cynthia N. Kettyle '71, clinical instructor of psychiatry at HMS, and director of medical student education in psychiatry, spoke on how the role of the physician in dealing with violence and its sequelae has changed since she graduated from HMS. Twenty-five years ago she regarded violence as a personal and social crisis that interfered with the physician's ability to do his or her job. "Now it is indisputable that diagnosing and treating violence and its impact on the lives of our patients are central to the physician's role." Parallel to the evolution in her own thinking, she said, certain

solidation of institutions, providers, pharmaceutical and device manufacturers, and academic health centers is inevitable in view of the very substantial excess capacity that we have generated, with little attention to the added value that additional expenditures provide.

We are nowhere near a steady state in the organization of the American health care system. Consolidations are likely to increase until most metropolitan areas have between two to six major networks of care for 70 or 75 percent of the population. Fee-for-service medicine will persist for perhaps 10 to 12 percent of the population, not unlike what has happened in Great Britain. A growing concern for all of us is the nature of the health care provided for the increasing numbers of uninsured individuals (now exceeding 40 million) for whom access to health care and health insurance is wanting.

My own view is that Americans will prefer a diverse health care system with a variety of organizations and care provided by both the public and the private sectors. Although we can learn from the details of other health care systems, there is no ideal health care system to which we can aspire and, like many other things, the solution for America will be uniquely American.

We will continue to have for-profit and not-for-profit activities, although the large for-profit managed care organizations will see profit margins dramatically decrease as excess capacity is wrung out of the system. As we are beginning to see in California and Minnesota, employers are now increasingly committed to understanding the value provided by health care dollars on behalf of their employees. We must take advantage of that interest. With consolidation, regulation will be required.

Within a few years, we will think about health care as a regulated utility. As such, prices will be determined by a market mechanism, but regulators will set an increasing number of conditions for the utility's activities. These will include rules about portability, movement across state lines and out-of-area treatments. It will include the necessity for accurate measurements of outcomes and quality of care in units comparable from one part of the country to another. In some cases, these requirements will arise out of the Health Care Financing Administration, as an increasing proportion of Americans receiving Medicare will enter managed care, regardless of any federal legislation. Similarly, almost all Medicaid recipients will be in a managed care system.

Although I have been predicting the development of the regulated utility for several years, I am always surprised by the velocity of change. I suggest that the development of laws in 13 or more states on excluding gag rules, the legislative activities on length of stay after vaginal delivery or Cesarean section, and the extensive set of regulatory requirements introduced by Governor Pataki in New York reflect the beginning of this regulatory activity. Ultimately, the federal government will have to become involved in the process in order to rationalize these regulations. It was not surprising, therefore, that in May a House committee held hearings on gag rules (i.e., rules limiting what a physician may tell a patient) and will consider

changes in medical student education at HMS have occurred that are designed to enhance the students' awareness of violence and its ramifications.

David Bear '71, professor of psychiatry at the University of Massachusetts Medical Center, presented the anatomy of aggression from a neurological perspective. Bear discussed the importance of doing an organic evaluation of patients who exhibit aggressive behavior. A neurological model of aggression may also assist doctors in the treatment of this behavior, and help them sort out external and internal triggers of aggression.

David Spiegel '71, professor of psychiatry and behavioral sciences at Stanford University School of Medicine, gave a presentation entitled "Souvenirs of Stress: Acute and Post-Traumatic Stress Disorder." Spiegel described patients' responses to violence, natural disasters and life-threatening illness. He also discussed the treatment of patients with stress disorders through means of psychotherapy, psychopharmacology and social support, i.e., group therapy.

This part of the symposium concluded with a presentation by Mark Rosenberg '71, director of the National Center for Injury Prevention and Control at the Centers for Disease Control and Prevention on "Violence Prevention: A Personal Perspective."

The Class of 1971 also participated in an eclectic event entitled "Personal Odysseys." Magruder Donaldson '71, moderator, greeted the packed amphitheater with some humorous observations. Beekeeping is one of his hobbies, and he likened the return of his classmates to HMS to that of bees to "the hive," equating the back and forth between returnees as the same as "the dance that bees do when they get together." But, since this part of the day got started after a generous buffet, with somnolence-inducing pasta, he expressed some concern about the post-lunch serotonin levels of his audience. He need not have worried since each presentation held the attention of the audience.

Alexandra Murray Harrison '71, an assistant clinical professor of psychiatry at HMS, discussed the relationship between her chosen profession and her family life. "What is HMS not so good at teaching?" she began by asking. Her answers were "ambiguity, ignorance (not knowing solutions), helplessness, tolerating patient's pain (and one's own) and disappointment (not living up to one's own standards)." These are things she had to learn in her personal life. As the mother of two children with

federal legislation in this arena.

There are three major elements that have to be confronted as these changes take place: 1) protecting the relationship between health provider and patient; 2) moving from a system that rewards excess care to one that rewards underutilization of resources, thereby threatening quality of care; and 3) addressing the need for limitation of resources, producing what has been called "rationing." I would remind you, however, that today we ration health care in the United States extensively by limiting eligibility for Medicaid and by limiting access for the uninsured and for people in rural and many urban centers.

Well-informed joint patient/doctor decision-making should be a paradigm accepted throughout our health care system. All these words are important. "Well-informed" means that rapidly developing information systems about the nature of care and its outcomes must be available to both doctor and patient so that values and the value of the procedure are both part of the decision-making process. Just as it is important for the referring physician to know the quality of care and the outcomes related to procedures, it is also important for the patient to be fully informed.

The videodisk technology developed by Jack Wennberg and colleagues is a good example of how this kind of information can be provided, but it is only the tip of the iceberg. The Internet will create a situation in which patients will be able to rapidly look up medical information about providers and procedures. I believe that the more explicit this process is made, the more difficult it will be for insurance companies or plan administrators to interfere with the process. To the extent that a well-informed joint decision is made, the patient and the physician are true allies.

We will see regulations to protect this right, but I believe it is equally important for the health professional to exercise it in a forceful way. Moreover, the paradigm extends beyond individual physicians and patients. Both the quality of care and the range of services provided in the health care network should be constantly reviewed by formalized committees of patients and providers. Physicians must share with patients the prerogative to assess physician performance and that of their organization with patients. Employers ought to be encouraged to insist that plans with whom they contract establish such patient/provider quality assessment panels.

Ultimately, such discussions between providers and patients are the best way to define a range of provider benefits to the satisfaction of all. Moreover, Wennberg's data suggest that, with few exceptions, patients have generally been more conservative than their physicians, opting for less aggressive therapies and fewer procedures.

In a non-fee-for-service environment, well informed decision-making by individual patients and groups of patients is likely to produce a similar result. The solution to the use of so many resources at the end of life is a well-informed process by which the clinical benefits, economic costs and potential discomforts are carefully assessed by patients and physicians. I expect that many patients and their families, when fully informed, will be

Tourrette's syndrome, she felt inadequate as a parent, and had difficulty tolerating her children's pain. As a professional one is taught to draw a boundary between one's self and one's patient, but there is "no boundary between the sufferer and the suffering as a mother."

In his presentation, "Making Children Whole: Corrective Surgery in the Third World," Jonathan Jacobs '71, associate professor of plastic and reconstructive surgery at Eastern Virginia Medical School, and president-elect of the American Society of Maxillofacial Surgeons, described how he spends much of his time abroad, performing plastic surgery in countries where certain facial deformities are most common. Much of his time has been spent in the Philippines where 1 out of every 250 children has cleft palate and lip. Jacobs said that social stigmas often accompany such cosmetic problems, and therefore there are great rewards in correcting them. He also has done similar work in Israel, El Salvador and China.

Jesse Sigelman '71, an associate clinical professor of ophthalmology at Cornell University Medical College, opened his talk, "From Shattuck Street to Wall Street: A Practical Guide," by saying that he was "delighted to be invited to speak here, rather than banished," referring to his new position on Wall Street. Sigelman held the attention of his classmates as he gave them unequivocal advice on "how to make a buck."

Sigelman became an investor at Shufro, Rose and Ehrman in New York City, as what started as a hobby became an obsession. He stuck closely to medical metaphors: comparing individual stocks to petrie dishes—one waits to see which ones will grow. He spoke of balance sheets as genomes and described the stock market as a "guess by many, many people." Nor did he beat around the bush on the subject of mutual funds, which he said are a "sham that accomplish nothing."

"Don't try to predict the direction of the stock market," he warned his audience, "and don't do stock picking yourselves." The latter requires too much time and concentration from doctors. And Sigelman called for introspection, "Evaluate your own personality before you evaluate stocks," he advised.

Sarah Jane Nelson

far less aggressive than they have been in the past. Having these kinds of joint discussions allows one to understand how individual patients and groups of patients value procedures, interventions and personnel, and will allow far more flexibility for the health care team. It will also reduce health care expenditures.

But this kind of alliance should not stop with managed care organizations caring for the middle class. Health care providers and patient advocates should work at community, metropolitan and state levels to establish provider/consumer panels to assess the quality of care in their communities. Regardless of the overall outcome of the Oregon experiment, it clearly began a process by which citizens and providers began a dialogue to put some limits on health care.

These panels can generate data and political will by not only looking closely at Medicaid management, but also at care for the uninsured and those in public facilities. In the case of Hawaii and Tennessee, important progress has been made in coverage for all citizens. Under Howard Dean's leadership in Vermont, coverage for all children up to age 18 has been accomplished largely through an incremental cigarette tax.

The next major emphasis in federal government ought to be a requirement to extend health coverage for all youngsters up to age 18. The logic of this approach is compelling. Most seriously ill youngsters are cared for under an entitlement program, and thus providing health care for all youngsters is relatively inexpensive. This is the kind of incrementalism that ought to continue at the state level, but also should be emphasized at the federal level.

In the absence of a radical federal organization of health care in the United States, I believe we should focus on three areas:

- free exchange of information about the nature of care and the use of that information by informed physicians and patients in making personal decisions, decisions about health care plans and decisions for their community;
- identify ways in which one can incrementally increase health care coverage; and
- monitor quality of health and health care at the state and federal level.

Patients and their families should be enlisted as partners in all three of these activities. If efforts take place in multiple states, they will ultimately force federal action.

The real question is whether providers and patients can form the kind of meaningful alliances that will assure that the outcome of that regulatory environment is productive and useful. I am optimistic that can happen because I believe that Winston Churchill was correct when he said that Americans always do the right thing—after they've tried everything else.

Kenneth I. Shine '61 is president of the Institute of Medicine of the National Academy of Sciences.

Members of the Class of '86 catch up.

Sacred Principles

by Nina E. Tolkoff-Rubin

New paradigms must remain true to the traditions

FRIENDS AND COLLEAGUES, GRATEFUL children of HMS, I bid you welcome as we return to the Quadrangle today for knowledge, fellowship and guidance. We come together at a time of great turmoil. Never in medical history has there been such a rich array of opportunities for preventing and treating human disease; and never in medical history has there been such an array of challenges that threaten to change the way we learn, teach and practice medicine. On the one hand, the miracles of modern biology provide us with unprecedented tools to assuage human suffering. On the other hand, the remarkable successes of twentieth-century medicine have sown seeds of our present economic dilemma.

Health care costs in the United States are now approaching $1 trillion, consuming 15 percent of the gross national product. This far outstrips the proportion spent by any other country. And despite this, we still have not provided basic health care coverage to all our citizens. Moreover, there is no clear demonstration—as measured by national health indices—that this capital investment is associated with better health than achieved in countries where less monies are expended.

With the failure of the Clinton health care initiative, the spiralling costs of health care have led employers and insurers to develop programs of managed care, in which cost containment incentives are built into the medical system. These managed care initiatives have evolved from simple price discounts, to strict forms of resource utilization management, to a system of capitated payments, which place providers at financial risk for the care of enrolled populations.

There is no question that economic pressures and incentives are changing care practices. Integrated delivery sys-

James Sabin '64 and Nina E. Tolkoff-Rubin '68

tems are emerging that impact the academic medical center and community hospital alike and are changing the relationship between primary care physicians and subspecialists. Many commentators have stated that nothing less than a reinvention of medicine and medical practice are necessary to deal with these new economic realities.

In times of upheaval, one of the important lessons that we were taught within these walls was that we should return to basic principles and then, on these cornerstones, build new structures of thought and practice that deal with the new realities. We are at one of those critical junctures. We clearly must respond to the economic imperatives—the changing needs and expectations of our patients and society. We must heed the wake-up call. At the same time, we must remain true to our core values. If we give them up, we give up what is most precious about who we are—our professional trust.

Nearly 30 years ago, my classmates and I stood here and in one of the landmark events of my life, swore to adhere to the teachings of Hippocrates: "I will look upon him who shall have taught me this art even as one of my parents... With purity and with holiness I will pass my life and practice my art... Into whatever houses I enter I will go into them for the benefit of the sick and will abstain from every voluntary act of mischief and corruption."

At the same time we swore to uphold this oath, we took note of a cardinal teaching of Hippocrates: "And if there be an opportunity of serving one who is a stranger in financial straits, give full assistance to all such. For where there is love of man there is also love of the healing art."

Hippocrates walked in the steps of Aesculapius, the first Greek physician. Fact or fancy, god or man, the spirit of Aesculapius continues to be celebrated and honored at this institution.

Statues of Aesculapius show him to be a tall, handsome young man, clothed in a long robe. In his hand he holds a staff with a coiled snake. In ancient Greece serpents were thought to represent life, wisdom and healing. The caduceus has become the symbol of the medical professon.

Legend has it that Aesculapius, son of Apollo, was a skilled and "gentle physician" known for his diagnostic acumen. He was raised by the centaur Cheiron, who taught him the secrets of healing and medicine. Temples were built to worship Aesculapius, and here the sick came seeking relief from their pain and suffering. These temples offered programs of rest ("temple sleep"), emotional support, proper diet, exercise and physical therapy—truly the beginnings of modern patient-focused care, disease prevention and health promotion, as Talbott notes in *A Biographical History of Medicine* (Grune & Stratton, 1970).

Aesculapius sired four children. His two daughters, Hygeia and Panacea, became the patronesses of public health and therapeutics (Our first female role models?); his two sons, Podelirius and Machaon, also were physicians and became the prototypes for internist and surgeon, respectively. One treated by diet and herbs; the other was agile with his hands.

To these beginnings, Hippocrates and his colleagues added the study of pathophysiology. "Sickness has a physical basis. If we can find the cause, we can cure the disease." Herein lies the cornerstone of modern medicine: a system based upon a reverence for learning and teaching, the placement of the patient first before financial considerations, and the recognition as Peabody put it so well—"that the care of the patient means caring for the patient." These are the principles that must be maintained in any new paradigm of medical care.

And clearly our principles are being tested in the new managed care environment! I pose these questions:

- How can we assure the quality of patient care as we vigorously strive towards cost containment?

- How can we preserve the three components of our mission—patient care, teaching and research—at a time when there are economic pressures to cut reimbursement from both the public and private sectors?

- How will the traditional role of the physician as patient advocate be assured in a capitated environment in which the physician may be rewarded for restricting the use of services and limiting access to care?

Medical care is not a commodity. As Jerome Kassirer, editor of the *New England Journal of Medicine*, observes: "Market-driven health care creates conflicts that threaten our professionalism." It strikes at the heart of the doctor/patient relationship. "Increasingly physicians may be forced to choose between the best interests of their patients and their own economic survival." We must not let this happen or we will lose the public trust.

We, loyal sons and daughters of HMS, may be considered among the most fortunate of the medical profession. We have been educated by leaders in every field of science and medicine, provided easy access to opportunities and the corridors of power, and assured that our ideas and thoughts will receive appropriate consideration. Harvard Medical School and her graduates have played a major role for many decades in dealing with challenges and developing new initiatives. Never has continuation of this tradition been more important.

If we are to remain true to the traditions and admonitions of Aesculapius, Hippocrates and our own teachers—Cliff Barger, Bernie Davis, Alex Leaf, Dan Federman, Roman DeSanctis and so many more—then we have the responsiblility to develop new paradigms that maintain our sacred principles and yet pay appropriate attention to economic reality. Chaos and crisis, although unsettling to say the least, provide opportunity, and HMS and her graduates have never

shirked either responsibility or opportunity. We are living in "interesting times"; whether this will be a curse or a blessing is in our hands.

What then are we to do? First and foremost, as Jordan Cohen '60, president of the American Association of American Medical Colleges, has stated, we must have a shared vision of who we are and what we want to be as we confront the "brave new world." And then we must take action.

Traditionally, the most gifted medical scientists and physicians have restricted their efforts to individual patient care, their laboratories and to education. With some notable exceptions, we have left politics to the politicians, economics to the economists, and health care management to the managers. We, and the public, can no longer afford this variant of tunnel vision. Practicing physicians must take on a leadership role to assure that patient rights, quality of care and medical decision-making remain true to the basic principles that make up our birthright.

To enable us to seize the reins of public leadership, HMS must do two things: prepare the present and future generation of HMS students for this function, and establish an alumni curriculum as a serious educational effort so that those of us now in a position to lead can be trained to be maximally effective in this new arena.

We must develop professionally dominated oversight initiatives to protect patients from overzealous capitated managed care programs. If we don't take on this responsibility as a profession, then it will be done to us!

Financial reward systems need to be developed in which no doctor is rewarded for withholding care, no patient is refused access because they are high risk. Instead, pools need to be established so that economies of scale are achieved and the individual doctor/patient relationship is protected. Legislation is needed, and we should take a significant role in designing and lobbying for this legislation, demanding that all aspects of the health care industry share equally in the costs of the desperately ill, the poor and the uninsured. No one segment of the medical system can afford to shoulder this burden alone.

Clinical research, particularly translational research, in which the discoveries of the bench are brought to the bedside, deserves a new investment. Harvard Medical School must take a leadership role here, both in the education of investigators and in designing and implementing programs that raise monies to support these efforts.

Finally, HMS is medical education. In the rush to economically driven medical care, the traditional emphasis on education that has made this the leading center for medicine in the world is being threatened. We must renew our efforts to preserve education. And just as the school has pioneered changes in the preclinical curriculum and brought new approaches to learning—we must bring the same creative energies to launch New Pathways in the clinical years.

As medical practice moves from the inpatient to outpatient arena, from the acute care hospital to the community setting, we must give our future physicians not only the intellectual and ethical framework, but the tools to take a leadership position in the new environment. Harvard Medical School should not only lead in preserving

Stephanie Pincus '68 yields the presidential gavel to Suzanne Fletcher '66.

medical education, but develop new ways to accomplish it. New course material and teaching approaches using telecommunications, computers and the "virtual human" are necessary, though will require increased investment. Harvard Medical School and her graduates are a national and international resource, and preservation of her principles and her products deserve support.

I stand before you a proud daughter of HMS. In a sense I have never truly graduated. I have been privileged to be taught by the greatest practitioners of the art and science of medicine in the world. I met my husband, also an HMS graduate, at MGH. I have been privileged to serve as an officer of the Alumni Association and to teach students, house officers and fellows alike.

As one reviews the writings and teaching of Aesculapius, Hippocrates, Barger, Davis, Leaf and others, I am impressed with not only the intellectual power but the moral power of these teachings. We, the heirs of our teachers, cannot forget these lessons and, as we confront the new realities, must remain observant to the time-honored truths. Otherwise, what will we tell our children?

Nina E. Tolkoff-Rubin '68 is HMS associate professor of medicine and director of hemodialysis and CAPD units at Massachusetts General Hospital.

Protecting Our Empathy

by Joshua M. Hauser

The difficulty of maintaining values learned in medical school

DESPITE ASKING ME SEVERAL MONTHS ago if I could speak today, Dean Federman was able to predict that I would be on call last night. And so I am grateful for the opportunity to turn off my beeper for a couple of hours and see firsthand a sunny day after a night on call. In the brief time I have here, I want to do three things. First, I want to talk about how my medical student experience prepared me for some of the issues I've faced as an intern. Second, I'd like to discuss how I see these issues differently as an intern than as a student. And finally, I want to think out loud about some specific pressures that threaten our empathy as new doctors. My remarks are not specifically addressed toward the issue of managed care, but I hope that they contain lessons for patient care, managed or not.

Eleven months after beginning my internship, I have realized that if there is one specific thing that prepares you for being an intern, I missed it. I remember wondering last year at around this time, as I sat in those seats I'm looking at now, what the secret was to being a good intern. And soon after graduation I went across the street to the Coop, looked around, and came back with a few packets of index cards, some books I hoped would fit into my white coat pocket, and some extra earpieces for my stethoscope. Standing here in 1996, I realize that those things are nice to have in a pinch but they don't do the trick.

While I couldn't find one secret to preparing to be an intern, there are many hints and pieces of my experience at HMS that did prepare me. From the start of medical school, the ideal of collaboration with colleagues plays itself out in our tutorials, our lab sessions and even in hanging around the medical education center. Our struggles in the first years of medical school frequently took the form of "How much do I need to study?" or "Where do I find the answers?" or "How much of the brachial plexus do I really need to memorize?"

These are questions we asked over and over of ourselves and our classmates and, often in vain, of our teachers. I say "in vain" not because they ignored us (which, I assure you, they only rarely did), but because they valued and encouraged collaboration among ourselves in searching for answers. And after we got over the ini-

tial frustration of the professor not telling us answers, we seemed to manage and often did learn things from each other.

As an intern, the parallels are inescapable. We rely on colleagues at all levels for advice, guidance, confirmation of our good ideas and redirection of our missteps. The questions are different: "How much do I study?" has become "What's the best way to work up this problem?" "Where do I find the answers?" has turned into "Is there Paperchase on this terminal?" But the route to the solutions is very much the same. In a world with so many choices of how to approach a problem and even more ways to treat a disease, this collaborative model becomes a necessity, both for learning and for patient care.

It is not just intellectual support and collaboration that is crucial. We also rely on each other for support during hard times, especially when things are going poorly. The flip side of the fact that outpatient care is flourishing is that now you have to be sicker to be admitted to the hospital. This means that the chance of things not going well is that much greater. More crucial than support from friends and classmates when an exam didn't go well has become support from friends and colleagues when a patient isn't doing well.

The second way that HMS prepared me for internship was by encouraging an openness to new experiences. This was something of a necessity in a system where you rotate from month to month to very different hospitals and clinical services. The range of styles and personalities in this community is vast: I sometimes wondered how some of the surgeons I met at the Brigham would feel at a dinner with some of the psychiatrists I worked with at Cambridge Hospital. But imagining dinner parties isn't the only form this takes. New academic and community experiences abound at HMS and would take the rest of the morning to discuss.

The most important new experi-

The audience takes a turn to talk.

ences we face, however, are those of our patients. At HMS, the patient/doctor course and in a more sustained way, our clinical rotations, impressed upon us the need to open ourselves to the lives of our patients. This was more than just listening in order to find the diagnosis; it was trying to connect with another person. At times, these patients were from different cultural or social backgrounds. At times, they were from different neighborhoods in Boston. All of the patients we saw then and see now, however, share one very basic difference from us: they are ill and we are, by and large, well. This may sound like an obvious point, but it is one worth emphasizing.

This openness to new experiences is more elusive in residency. With the sheer volume of new tasks we now face, connecting with others becomes that much more difficult. In medical school, we were taught to listen to patients, to ask open-ended questions, and to understand how patients' illnesses affected the rest of their lives. These were broadly called "psychosocial issues," while in residency they are the "touchy-feely" aspects of medicine. We quickly discover that things are turned on their head now. Listening too hard takes too much time, open-ended questions lead to too many tangents, and the effect of illness on the rest of the patient's life becomes a "placement issue" for which we have case managers.

The third way that HMS prepared me for residency and beyond was through a number of role models and mentors I encountered along the way. These have been teachers in classes, colleagues in research, and people whom I bumped into in the hallway. I have been explicitly and implicitly encouraged to pursue my interests in medical ethics and patient/doctor relations.

In internship, role models and teachers are much closer in age and position to us. They are residents and fellows who teach us not from perspective of many years devoted to a research question or a panel of patients, but from the experience of just having been where we are now. These are different sorts of role models and equally valuable ones.

When I was a third-year medical student, I saw a patient in my surgery rotation who made a tremendous impression on me and spawned much of my current interest in end-of-life care. The case involved a woman in her 60s who came to the hospital for the repair of a hiatal hernia. She had been healthy all her life and this operation was to delay her start of summer gardening, but nothing more. In the operating room, it was discovered that she had, to the surprise of everyone around the table, ovarian cancer spread throughout her abdomen.

After the operation, I remember the discomfort of everyone on the team when it was time to talk with her. This went on for days. Suddenly, this healthy woman who had come to the hospital for a relatively minor procedure was now a patient with a disease that would likely end her life. I also remember my own discomfort in talking with her and with the doctors on the surgical team, and I wondered if there was any way we as students and doctors could learn more about being with and talking to patients near the end of their lives.

After that third rotation I worked at the Division of Medical Ethics on a video and a course about care near the end of life for medical students, and at the Brigham analyzing advance directives—living wills and health care proxies. Each of these projects involved the work of many faculty and student collaborators with whom I explored what still feel like very new and complex ideas. The patients who triggered these interests in me and who form the core of our course are perhaps the most valuable collaborators.

These three aspects of my development at HMS—the value of collaboration, the openness to new experiences and the input of a number of mentors—prepared me well for internship and beyond. Many specific values and principles come within these pieces, but today I wanted to highlight the more general ways I've learned. Principles such as an unstinting respect for patient autonomy, the preservation of informed consent, and a devotion to ensuring equal access to care must all come within these ways of learning and practice.

How do I see things now as an intern? For one, I've tried to maintain the values and connections that I've just discussed. But I also see (often all the more vividly after a night on call) how pressures of time can make us tired, discouraged and even angry. I see how the volume of work exposes us to many different lives and illnesses but also overwhelms us. Eleven months after beginning internship, I know that my colleagues and I are trying to preserve the ideals we began with, but I will be candid and say that it can be very difficult.

I don't think it's an oversimplification to say that compassion and empathy require time and concentration. No matter how much we fight against it, it's much harder to muster the compassion that we should have at midnight than earlier in the day. And yet, it is probably the patient scared and in pain at midnight who needs our compassion more than the elective admission at noon.

It is much harder to take the time to listen to and understand a patient whose language is clouded by dementia, delirium or alcohol than one who gives a clear history. Perhaps reflecting our own frustration, we often refer to these patients collectively as "poor historians." And yet, it is probably these patients who feel lost or confused by their disease who most need our time and understanding.

But one of internship's first and lasting lessons is that our time is short and our goal is efficiency. And in many ways, this stands us in good stead; in some, it doesn't. One measure of a seasoned intern is how short the "social

history" is for each patient. If we're really good, it's just four words, a few semicolons and some numbers: "cigarettes: 50 pack years," "alcohol: 2 a week" and "other drugs: none." The family history isn't even words, it's letters: CA, CAD, NIDDM. I stepped outside the bounds the other day when I asked a 94-year-old patient about her family and got a whole new set of numbers and words: 6 children, 22 grandchildren and 26 great-grandchildren. These numbers, it turned out, were much more important than the number of cigarettes she had smoked many years ago.

As residents and physicians, we must continue to step outside the bounds and ask about those things in a patient's life that are not so obviously connected with their illness. Often, I suspect, we will find that the links are not so obscure. I recently admitted a patient whose alcohol use led him to drive while intoxicated, causing him to crash his car. This led him to the emergency room and on to the operating room for the evacuation of a subdural hematoma. The real question, however, is why he began to drink alcohol in the first place. But when he comes in at 1:00 AM and gets a lumbar puncture, and he needs his sleep and you need yours, that's a hard question to ask, let alone answer.

It is hard as an intern to explore all these pieces of illness while we are juggling other tasks. In medical school, we had a few patients at a time and hours to talk. As interns and residents, we have more patients, less time and endless lab values, x-rays and discharge summaries to keep track of. But even as interns, I think we can ask some of these questions of our patients.

How often, for instance, do we know the latest potassium value compared to knowing patients' occupations or who they come home to at night? I'm not trying to advocate that we neglect the careful attention to acute medical issues that patients require, but that we also try to make room for the other things. Far too often, the opportunity to take time with a patient that was a privilege as a student threatens to become a burden as a resident.

I saw a woman in her 60s recently who was admitted for chest pain. She had had multiple admissions to the hospital and trips to the emergency room for chest pain, and a coronary artery bypass a number of years before. On the first night, we asked her all about her symptoms, her previous hospitalizations and, of course, about cigarettes. She had some chest pain that night. Her EKG was fine and the nitro under her tongue worked wonders, but she sure looked scared. The next morning she told us that she felt tired and dizzy and didn't even feel like getting out of bed. She said she often felt this way at home. Her blood pressure was fine. Her pulse was regular. We were "rounding" so we moved on to the next patient.

Later in the day, a fellow resident and I went back to talk with her. She looked scared and sad. We asked her how she was and at first she said okay. Then we asked her how things were at home and she began to cry. She told us how she lived with her sister who ignored her, even though she was completely dependent on her for shopping, for getting her medicines, and most, importantly, for companionship. She hadn't seen any of her other family members for months. She hadn't slept through the night for years and hadn't been able to concentrate or paint like she used to. We talked with her for a while about how we might help her because we began to realize that her chest pain was no longer her major problem; it was more likely her depression.

This all came out not because of a subtle physical exam finding or test, but because we allowed ourselves to ask questions and for whatever reason, she felt able to confide in us. The next morning, her chest pain was gone. I don't think we had gone too far in helping her depression, but at least we had begun. We had done so simply by using what are persistently scarce resources in a very rich hospital: time and attention.

Just as time and fatigue can threaten our empathy toward patients, our own language can also be damaging. I want to end this talk by reflecting on some of the language that we use when we talk about patients. If we listen to how we talk, I think we can learn a lot about how we act towards patients.

I've been continually struck this year by what we as residents do to patients. I choose the word "do" intentionally. While, in a larger and very important sense, we try to "cure" and "help" those who come onto our ward, our daily rounds are composed of much more mundane battles. Again I say "battles" on purpose. Many of you probably remember talking about the drugs we "have in our armamentarium." The drugs may be different now, but the expression remains. The old expression "war on cancer" and newer "war on AIDS" reflect this too.

What kinds of battles do we as medical residents undertake? A few scenarios. When we want to diurese a patient, we "hit him with some lasix." When a patient's blood pressure is a bit high or his angina keeps coming, we "slap a little paste" on him to give him nitroglycerin ointment. The patient in respiratory distress gets "gassed" and if things don't turn around he gets "tubed" when he needs to be intubated to support his breathing.

On one level, these expressions are trivial shorthand adopted to make our communication easier. But I think they contain more than that. In a climate where we constantly face diseases out of our control, I think these expressions reflect some attempt to get a handle on things that we can control. It's too simple to say that these expressions have arisen only out of a need to control patients, but it is naive to deny that this is not partly the case.

And what about when we have no control? When we can't do anything to stop the illness unfolding before us,

we sometimes say that a patient has "failed" treatment. We sometimes hear a patient whose condition is deteriorating described as "trying to die." Again, we know these sayings are just shorthand for describing treatments that haven't worked, but I've often wondered why it is more common to say that they, the patients, have "failed" rather than that we, the doctors, have "failed."

Finally, I realize that the beginning of my residency has reinforced what I learned in medical school, both in the need for collaboration and openness to the experiences of others and, even more basically, in the recognition that there is much out of our control as doctors and much we do not know. We can try to control as much as possible and we often do—anyone who has spent much time in an ICU knows the bounds of our control are wide. And sometimes this is important.

But equally important, I think, is that we try to connect to and learn from our colleagues and our patients in interactions that we have every day. This takes our attention, our time, our patience and a piece of ourselves. These are all qualities that we must vigilantly protect for our own sake and for those we care for. If we don't, I think we risk losing many of the reasons we went into medicine in the first place.

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The Ethics of Efficiency

by James E. Sabin

In pursuit of good practice in managed-care psychiatry

I WAS FLATTERED WHEN DEAN Federman asked me to speak on Alumni Day, until he actually gave me my assignment. With slight embellishment, this is what he said:

"Jim, I understand that you have been writing and talking about ethical managed care. Most of the audience on Alumni Day will not be very happy about managed care. Alums who believe in the tooth fairy may also believe there is such a thing as ethical managed care, but the rest will be pretty skeptical. So do your best, try to be amusing, don't cite any references and say something personal!"

I have been practicing psychiatry at the HMO that is now called Harvard Pilgrim Health Care since 1975. Psychiatry is a perfect laboratory for studying the ethics of managed care because it depends so much on trust and the quality of the doctor/patient relationship. What I want to do now is put myself on the couch for a change and free associate about how ethical issues actually play out in my practice.

Harvard Medical School taught us the basics of medicine. Surgeons give operations. Internists give pills. Psychiatrists give time. Let me make my first confession. In practice I spend very little time grappling with the big ethical issues that you might expect a doctor in managed care to be struggling with—issues such as balancing Hippocratic commitment to individual patients with stewardship or public health commitment to a population, achieving fairness in resource allocation, and distinguishing between what people want and what they really need. For me, these large, "capital E" ethical issues tend to show up as humble, "small e" nitty gritty ethical issues about managing time!

When I had a fee-for-service practice, I could decide that my practice was full and steer new referrals elsewhere. My life at the Harvard Plan is different. As a member of a large group practice, I am responsible to the HMO population, not just to the members who are already my patients. That means that unless I have taken on more referrals than we expect our doctors to handle, my practice is never closed.

When I meet patients for the first time, they are often suspicious—occasionally because they are paranoid, but more commonly because they read what journalists and cartoonists say about managed care. Twenty-one years ago, when I started to practice at the Harvard Plan, patients were suspi-

cious because they heard that HMO psychiatrists favored short-term treatment. They worried that I might suggest brief treatment when they really needed to be seen for a long time, or that I might recommend outpatient care when they needed to be in the hospital.

In 1996 the suspicions are more extensive. Patients have read about investors who earn more by paying doctors to do less and about gag rules designed to keep patients in the dark. Today's suspicious patients don't just fear the HMO's clinical approach—they worry about the doctor's motives as well.

So picture the situation when I meet a patient for the first time. The patient may be worried about the treatment I will offer and my motives for offering it. At the same time I am aware of the need to keep myself available for patients whom I haven't even met yet. These first meetings between semidistrustful patients and a possibly self-protective psychiatrist sound like a recipe for disaster.

I learned a key lesson about the doctor/patient relationship in managed care from one of my first patients at the Harvard Plan, who was on a rampage against the HMO when I first met him. "This HMO is trying to get me to see a social worker and get me out as fast as possible! I need long-term therapy and I need a doctor! What's going on here?"

I am happy to tell this group that HMS tradition came to my rescue. We were taught—and not just in psychiatry—to go into difficult situations more deeply, not to run from them. So I did what our clinical mentors at HMS taught us to do. I simply asked the irate HMO member to help me understand exactly what he felt he needed and sat back to listen.

The answer was quite illuminating. The member, who became my patient, told me he thought he might have depression and definitely had what he called a "nudgey personality." He wanted to see a doctor because he thought he might need medication. And he wanted long-term treatment because he thought—quite correctly—that the condition was chronic.

Because the doctors in the Harvard Plan group practice take responsibility for the HMO population as well as our individual patients, we don't place arbitrary limits, such as requiring short-term treatment, on our practice. This made it easy for me to agree with my patient that the treatment would have no time limit.

But what about the intensity of therapy? My patient glared at me and said it should certainly be no less than once a week for an hour. I acknowledged that in the fee-for-service community once a week therapy would be the norm and that there was certainly no contraindication to that schedule. But I explained our group's commitment to using time as efficiently as we could in order to be available to all members and to keep the cost of the program down. I suggested that we meet a couple of times soon to understand more about his needs, but I predicted that once we had a plan we could probably conduct the treatment with fewer meetings. Was he willing to give it a try?

He was. Twenty years later we still see each other, generally every two to three months for a half an hour. He is well past retirement age. His depression recurs and the "nudgey personality" is still there, but he handles both conditions with aplomb.

I apply what this man taught me every day in practice. When I meet new patients I am determined to understand their model of what needs to be done to set things right. I hope they are not going to say "five times a week psychoanalysis" or "long-term hospital care at McLean" because I know that I won't be offering those treatments. But we have to start out with our cards on the table, even if that means dealing with disagreement and disappointment. Once we get to this basis of mutually understanding the facts, we can generally use our ingenuity to make a mutually satisfactory plan.

Here is another confession: When I got a wristwatch that gives the date as well as the time, I fell into a new practice. When my patients and I were facing a major problem that had no definitive solution, I would often find myself rather ostentatiously looking at my watch. This is bad manners, and certainly can raise the patient's anxiety about time and my commitment to the treatment.

But what came out of my mouth wasn't about the hour, but the calendar. In a circumstance like the one we are in here I would say something like, "If we happen to be meeting on Alumni Day on Friday, June 7, 2001, my guess is that we will look back and say that we were just beginning to understand the ethics of population-based practice and honesty about resource limits in 1996."

With hindsight I understand what I am doing with the watch. Looking at it so ostentatiously invokes the finitude of the precious time the patient and I have together. In my population-based

John Appel '36

HMO practice I am always striving to accomplish objectives with the least expenditure of time. But by using the watch to imagine a future in which my patient and I are together looking back at the present moment, I am presenting an image of ongoing collaboration and solidarity, within which we can address the uncertainties of the illness despite our recognition of resource limits.

Twenty-one years of practice at the Harvard Plan convince me that doctors and patients can join together openly and honestly to meet the challenge of managing individual care in the context of limited resources. This may sound like one of Pollyanna's fantasies, but when I started HMS in 1960, most doctors still believed it was cruel and destructive to tell the truth to patients with cancer. Medical students were taught that telling the truth would inevitably destroy our patients' hope and their capacity to trust us.

In 1960 that hypothesis was presented as an incontrovertible fact. In 1996 we know it was wrong, and medical students learn how to join with patients in confronting limits at the end of life. Done skillfully, this improves care and deepens trust.

If we doctors have learned how to join with our patients in an ethical manner to face the end of life itself, we can certainly learn to join with our patients in an ethical manner to face and manage the disappointments imposed by resource limits.

Everything I have learned first hand about the ethics of managed care, however, has been learned in a not-for-profit group practice. While I am deeply committed to the kind of population-based group practice that I have been privileged to be part of for 21 years, I am deeply uncomfortable with the rapid emergence of large, investor-owned health systems. I frankly have no sense of how I would handle the idea of constraining care to produce dividends for the owners in my relationship with patients and I hope I never have to do it.

However, HMS taught us to be empiricists, and as much as the idea of investor-owned health care systems goes against my understanding of a viable context for ethical health care, I have to recognize that my reaction is a hypothesis. Maybe there is a for-profit model that will work for health care—perhaps derived from our experience with regulated utilities, which are allowed to make a profit but only under stringent conditions designed to protect and promote the public good.

The last time I saw former-Dean Robert Ebert was in December, just a month before he died. I was presenting a proposal for a center for ethics in managed care, to be jointly sponsored by the Division of Medical Ethics at HMS and the Department of Ambulatory Care and Prevention, which is based at Harvard Pilgrim Health Care. Dr. Ebert loved the idea and hoped he would live long enough to help us bring it into existence. He reminded me that when he launched the idea of the Harvard Plan 30 years ago, he pictured an entity that would help the country explore what it meant to practice good medicine and good ethics in a setting that recognized that while our resources are extensive, they are limited.

His illness prevented us from learning more from him, but we were profoundly grateful for his blessing. I like to imagine that when my colleagues and I join with our fellow HMO members to pursue his vision of good practice and good ethics, he is looking over our shoulders wearing his patented bow tie and smiling.

James E. Sabin '64 is HMS associate clinical professor of psychiatry and associate director for the teaching program at Harvard Pilgrim Health Care.

Professor of Anatomy Erick Erickson, Carleen Zawacki and Bruce Zawacki '61

Reunion Reports

62ND

Reunion photos by Richard Wood Studio

THE CLASS OF 1934, WHILE HAVING only 28 survivors, experienced a warm and charming 62nd reunion. Starting with the symposia, a brief two-day program was planned with a dinner Thursday night in the deanery of Vanderbilt Hall—a suggestion made by Nora Nercessian. Since we had been denied access to this sanctuary during our four years, it seemed a sporting finish to our memories of our HMS years. Indeed, it proved to be a cozy, quiet cove in which to put down anchor and remember. We had a delightful evening, with the environment full of reminiscences.

On Alumni Day, at the end of an excellent program, our mass fled to the airport or home, leaving only one of us for the picture. All who came were glad to have joined old friends, as the morbidity and mortality of the next three years make a 65th reunion unlikely!

Thomas A. Warthin '34

60TH

Photo by Larry Lawfer

THE 60TH REUNION OF THE CLASS OF 1936 was blessed with good weather, stimulating exposure to advances in medicine, and cordial fellowship. Of the 52 living members, 16 returned, two traveling from the far West—Joe Ross and Ed Cantlon.

At a reception in the Lahey Room of the Countway Library, Dean Federman '53 described differences in the present day school, i.e., the equal numbers of women in the first-year class.

On Friday socializing resumed with the Alumni Day lunch on the Quadrangle. The class gathered that evening at the tasteful, secluded Wellesley home of Jane and Sarg Cheever for an elegant catered dinner. The presence of Ethel Ulfelder and Mary Eliza McDaniel added luster to the occasion.

The next morning under hazy skies we sailed the Charles River for an hour with the skipper's commentary on the sights ashore. Then it was on to a luncheon given by Elizabeth and Will Sweet in the Loeb House in Harvard Yard, a manorial setting, erstwhile home for the presidents of Harvard. The Alumni Office provided bus transportation for these functions, but on two occasions "getting to the bus in time" proved too difficult for otherwise solid examples of graceful aging.

Arthur Baldwin '36

55TH

GOOD WEATHER, GOOD SPIRITS AND mellow bonhomie characterized our reunion. Twenty-six members and 20 spouses of the Class of 1941 attended a marathon: Thursday reception at the Countway Library, Friday Alumni Day exercises on the Quadrangle, followed by lunch, Friday dinner at the Harvard Club, culminating with a fine clambake at the Culvers' house in Lincoln on Saturday.

Our pre-reunion questionnaire asked for the names of teachers fondly remembered. This produced an astounding total of 83 names. We recalled them in a long and uproarious series of anecdotes, enlivened by song (Hawn, Kanwit), and especially Joe Foley's seemingly endless store of wonderful people and events. We felt lucky indeed to have known all these men, most of whom received little or no pay for teaching, but who nevertheless made important contributions to medicine. We felt that despite war and financial problems, we were glad to be who we are and active during the golden age of American medicine.

Curtis Prout '41

50TH

SIXTY-THREE STALWARTS (61 PLUS OR minus 2 percent) with or without wives or friends attended and enjoyed seeing old friends in familiar surroundings. Since leaving the Quadrangle, we have practiced and researched from Maine to San Diego, from Seattle to Miami, and from Great Britain to Pakistan. In so doing, we have collected two Nobel Prizes in Medicine, have been deans and professors, have served as major medical administrators and have practiced as superspecialists, subspecialists and generalists. In other words, we have contributed to the well being of mankind.

The festivities opened Thursday with a reception in the Common Room of Vanderbilt Hall, which looked the same except for John's absence behind the desk. On Friday there was an alumni symposium in the morning. A class picture was taken at noon and dinner took place in the evening in the Courtyard Cafe in the new Alpert Research Building of the Quadrangle. The company was excellent as were the food and drink. After dinner there was no lack of speakers from our class who chose subjects from "What HMS Meant to Me" to "How to Fix the World," each limited to two minutes by an uncompromising George Richardson. On Saturday we gathered at George and Becky Richardson's house in Nahant for a Down East clambake.

The weather cooperated beautifully for all these events. The alumni office seemed happy with our $78,000 contribution, and so we scored a perfect 10 in the dash, weight lifting and the marathon.

John W. Braasch '46

45TH

THE CLASS OF 1951 GATHERED IN FINE weather for its 45th reunion. Ruth and Herb Weiss hosted supper on Wednesday for 53 class members and their spouses. Gerry and Ruth Foster opened their home for a buffet dinner for 67 on Thursday evening.

Friday's program on ethics under managed care produced numerous questions and comments from alumni/ae of all ages and styles of practice. The Weekapaug Inn weekend provided ample opportunities to reminisce, to consider pros and cons of retirement, and to attempt to make sense of the rapidly changing health care field. Many expressed a hope for a big gathering at our 50th reunion in 2001.

Ellen Bell '51

40TH

THE 40TH REUNION OF THE CLASS OF 1956 was a huge success. The camaraderie, respect and friendship that the members of the class have for each other produced a record participation for a 40th reunion.

The reunion began with a buffet reception at the home of Barbara and Joel Alpert, which was attended by 86 classmates and spouses. The informal setting, combined with superb food and beverages, provided an excellent atmosphere for the members of the class to rekindle memories. The long-standing warmth among the members of the class was immediately evident.

The following afternoon, 60 people had a unique re-introduction to Boston on a Duck Tour. This amphibious vehicle traveled not only through the streets of Boston, but also into the Charles River. This was followed by a formal dinner at the Bay Tower Room attended by 102 guests.

Classmates attended a busy Alumni Day, pausing to join in tribute to Cliff Barger, our beloved instructor in physiology. Following the Alumni Day program, the class regrouped at the Chatham Bars Inn on Cape Cod. The renovated inn was elegant and the weather sparkled with a large fog bank remaining appropriately off shore. Fifty-nine of us had the opportunity to further enjoy the long-standing relationships among the members of HMS '56. The clambake on Friday night and elegant dinner on Saturday were opportunities to pause and toast. Our exuberant spirits stood out, perhaps to the amusement of others in the dining room. Following dinner both evenings, we were treated to the artistry of Dick Sogg at the piano. The voices of HMS '56 and our spouses and a few acquired friends from the dining room joined Dick's special renditions of popular tunes as well as excerpts from the 1956 second- and fourth-year shows, ending with a rousing rendition of "Gaudeamus."

In the years between the 35th and 40th reunion, our class has held two mini-reunions in New England, both attended by classmates living as far away as California, together with their spouses or significant others. We have been friends for a long time and look forward to our future reunions. Whatever routes we have pursued, whether still active (many) or retired (a few), we know that HMS has provided us with the best possible roads to travel.

Stefan Schatzki '56 and Joel Alpert '56

35TH

THE 35TH REUNION OF THE CLASS OF 1961 was truly one of the most fun-filled, enjoyable and flawless ever. I say this with all modesty because, as reunion co-chair, I had little to do with this perfectly wonderful outcome. It was largely due to cooperative weather, great attendance, wonderful accommodations and good luck! There was also the not inconsiderable hospitality of my co-chair, Tenley Albright, and her husband, Jerry Blakeley, who opened their Oyster Harbors home and all its amenities to classmates and their spouses for the entire day and evening on Saturday, June 8.

But I get ahead of myself. The activities began on Thursday evening, when Ren and Peggy Zimmerman hosted us in their wonderful home for a buffet reception. The food was ethnic (Brazilian) and delicious, the indoor and outdoor settings lovely, and as usual, everyone who attended greeted everyone else as if we had just seen one another yesterday. On Friday morning there was a great turnout for the Alumni Day activities and the usual chaos and conviviality at the taking of the class picture.

On Friday evening, 70 plus classmates and spouses attended a wonderful dinner at The Country Club in Brookline. It was a perfect setting, with terrific service, delicious hors d'oeuvres, a wonderful main course, and an ambulatory dessert and coffee hour. Between dinner and dessert we were entertained by Peter Liebert's now-traditional slide show of nostalgic photos from our medical school days and prior reunions.

We were also privileged to have as our guests Professor George E. Erikson (anatomy) and his wife. Professor Erikson gave a short presentation about the Erikson Biographical Institute, which houses an invaluable and enormous database of information about thousands of Harvard graduates, their appointments, their honors and

30TH

THE CLASS OF 1966'S 30TH REUNION began Thursday evening with a cocktail buffet at the gracious home of gracious hosts—Jensie and Bill Shipley in Chestnut Hill. The large turnout of docs, spouses, kids and significant others combined with perfect weather to start off a fine reunion. Friday, Alumni Day, began with a symposium on medical ethics in a managed care era which provoked many questions and much thought. Luncheon was fine, the weather was perfect, and the class photo proves that many of our fine class can follow simple instructions by remembering when to show up. Then on to the Stage Neck Inn in York Harbor, Maine where some started right in with power naps while others walked along the breathtaking coastal paths. The really serious ones began shopping at Freeport and Kittery.

Jay Kaufman, as usual, was a masterful M.C. Friday evening. Before dinner he asked for a quiet moment and read the names of the seven of us who have died since 1966. Jay passed the microphone to members of the class in between courses of a fine meal complemented by some very good wine. (You can be sure that the wine

professional histories. He has just added information on almost 100 of the members of the Class of 1961.

Our final day of reunion activities began in the morning and did not end until mid evening. A bus and assorted other modes of transportation brought about 50 classmates and spouses to Oyster Harbors on Cape Cod, the vacation home of Tenley and Jerry Blakeley. Here we had muffins and coffee, lunch and dinner, all delicious and beautifully served. Tennis, badminton, swimming, boating, ping pong, beach or poolside lounging, walking and assorted other activities were available. Refreshments were served throughout the day and everyone had an extended opportunity for conversation, socialization and relaxation. Rumor has it that the only sour note was struck when the bus got a little lost in the heavy fog on the way back from the Blakeleys.

A final word: We missed those of you who could not be there. Even though we reunite only every five years, it seems as if we have a better time together, get to know one another better and feel closer to each other each time we do. To all of you who thanked me verbally and in writing for my efforts to help prepare for the reunion, let me add that it is a labor of love and well worth the small amount of time and energy involved. My thanks to Nora Nercessian and her staff for all their help with the arrangements and to the rest of the reunion committee for their efforts. And most of all, my thanks to Tenley, the best of co-chairs. I'm already looking forward to 2001!

Muriel Sugarman '61

***Boston Herald* photo announces that women invade the Deanery, 1958.**

Digging out of a snow storm: D. Michael Crick, Tom Gutheil and Alfred Goldberg

was good because Gil Grave asked for the label). The spontaneous remarks from classmates were thoughtful, anguished, encouraging, upbeat, tender and revealing. Many expressed angst about the changes wrought by managed care. The Marmors and the Fletchers demonstrated once again that behind every succesful HMS graduate there is a lovely supportive husband. When things got too rowdy and raucous, Jay turned to HMS's favorite man of the cloth, Ned Cassem, SJ, hoping for a more sober tone. But all he got was more humor and outrageous remarks.

Gerlinde Bowen said to some at tennis Saturday, "I read the In Memoriam section in the reunion book. What a shame that some of you people have taken your own life. Imagine. Why don't you tell your classmates that if they ever feel really bad they should come up to Shelburne, Vermont and stay with Chuck and me. We'll take you sailing on the lake and you'll be fine." Linda Stubblefield spoke up on Saturday evening. "I've known many of you for years and I've made new friends this weekend. I've seen what effort, sacrifice and caring you've put into your work over these years. I want you doctors to know I'm so proud of you!"

We left on Sunday going back to separate careers, feeling good. Some thought we shouldn't wait five years to see each other again.

Richard Hannah '66

25TH

THE 25TH REUNION OF THE CLASS OF '71 was not only a fabulous success, but the best ever. Alex Murray Harrison's cocktail party was packed. The dinner at the MEC at HMS was terrific and the harbor cruise was a pleasurable end to the events of the week. The highlight of the reunion was hearing our own classmates deliver outstanding lectures at our class symposium. Stu Orkin, Bonnie Pagon and John Curd spoke on the new genetics. David Bear, David Spiegel and Mark Rosenberg spoke on the impact of violence; and Alex Murray Harrison, Jon Jacobs and Jesse Sigelman spoke on personal odysseys. (I bet people are still soliciting financial advice from Jesse!)

For those who couldn't attend the reunion or hear the results of the anonymous questionnaire, here is a thumbnail summary: 92 percent of our class live in our own houses with four percent each in condos and rental units. Twenty-nine percent own more than one residence; 27 percent live in the city; 58 percent live in the suburbs and 15 percent in the country. Seven percent of the respondents disclose a household income of 50 to 100 thousand; 36 percent between 100 and 200 thousand; 33 percent between 200 and 400 thousand; 19 percent between 400 and 600 thousand, and 4 percent over 600 thousand.

Sixty-nine percent have stayed married to their original spouse for a mean of 22.5 years; 24 percent are on their second marriage; 5 percent are cur-

20TH

OUT-OF-TOWN GUESTS WERE WELCOMED Thursday evening by Tom Aretz, who organized a get-together with cocktails and hors d'oeuvres at his house. Tom later commented that as a class, we are very light drinkers.

For many of us though, our first encounter in five years occurred on the steps of Building A, when we assembled for our class photograph on Friday. Fortunately, most of us recognized each other immediately. The weather was sunny and pleasant, and the beautiful and nostalgic surroundings helped catalyze our reminiscences from 20 years ago and our "catching up" with each other.

That evening, we had dinner at the newly renovated Top of the Hub. The highlight was Marvin J. Bittner's rendition of "The Seven Warning Signals," a speech he had given and directed toward Dean Robert Ebert 20 years ago. For the occasion of our reunion, Marvin composed another verse (the "Second of the Seven Warning Signals"). He promised to add verses incrementally every five years. This will provide us with the impetus to remain healthy. After dinner, we also remembered those colleagues who have passed away (Jay Knighton, Jack Schiff and Lewis van Hoosear).

The weekend finale was an impromptu picnic that was graciously hosted by Fred and Joan Mansfield in Lincoln. The weather continued to be perfect and we had a chance to meet the children of the class, some of whom will be in the next generation of HMSers. Finally, of course, there were planes to catch and other obligations to meet. We resolved to stay in closer touch with each other over the next five years, as we begin now to plan our gala 25th-year reunion.

Samuel Z. Goldhaber '76

rently divorced. Sixty-nine percent are in excellent health; 24 percent have minor health problems; 3 percent have signs of serious problems and 1 percent have serious health problems. Sixty-seven percent weigh more than in school (mean+16 lbs); 13 percent less (mean=12 lbs) and 20 percent the same. Forty-one percent describe themselves as liberal; 32 percent conservative, with the remainder neither. Fifty-eight percent voted for Clinton; 32 percent for Bush and the rest Perot. Fifty-one percent favor a single payer health system; 13 percent favor managed care; 5 percent favor status quo and the rest, none of the above. We appear to be very happy in both our professional and personal lives, though a significant fraction have wound up in different positions than we thought we would be. Seventy-three percent of us would go into medicine today but only 49 percent would encourage our children to do so.

It was really fun seeing all the classmates who returned for the 25th reunion. Congratulations to Ann Stark, Alex Murray Harrison, Frank Berson, Joel Schwartz, Craig Donaldson and Bill and Cyndi Kettyle for their hard work in putting together this event.

Mark Goldman '71

March on Washington

15TH

THE 15TH REUNION OF THE CLASS OF 1981 had the shape of an hourglass. At the top, we had the opportunity to read about the activities of 50 of our classmates in the reunion book. Michael Payne did a superb job compiling the answers to two questionnaires and editing the tome. I was pleased to learn that the survey respondents from our class have had an average of 2.22 children.

After the book arrived, I was looking forward to seeing old friends in the class picture, which turned out to be the narrow waist of the hourglass. The picture call resulted in exactly two people on the steps of Building A, Carl Schwartz and I.

The Friday night dinner at the Bay Tower Room was an opportunity for 30 people to enjoy an amazing view of the harbor as the sun went down. Most people recognized each other and we were delighted to see classmates from Ohio, Pennsylvania and Florida. The conversations continued in the leafy backyard of Judy Lieberman's home on Saturday afternoon, when 20 classmates and many children added to the fun. We look forward to more gray hair and more children at the 20th reunion.

Ilonna Rimm '81

10TH

THE CLASS OF 1986 HAD A WONDERFUL 10th reunion. There was a spectacular turnout, with alumni returning from all corners of the country.

On June 7 a dinner was held at Peking Gardens in Lexington where a number of 'awards' were given out, including the long distance award to Linda Leum, who came from Washington state; although David Swerdlow claimed to have just gotten off a plane from Rio de Janeiro, Brazil. The next day a picnic for alumni and children was held at the home of Mark Hughes and Delia Sang. There was a spectacular turnout with 55 adults and 33 children (thank goodness for the jungle gym!).

A special thanks for the reunion success must go to the committee consisting (besides myself) of John Ayanian, Ming Hui Chen, David Cohen and Ken Kay. We look forward to the 15th reunion!

Mark Hughes '86

5TH

THE CLASS OF 1991 GATHERED AT the Cornucopia-on-the-Wharf restaurant on Friday, June 1 for a lovely dinner overlooking Boston Harbor. The next day, the class met for a terrific picnic at Auburndale Park in Newton. We were fortunate to have a large number (about 25) of alumni in attendance. Sally Holtzman traveled from Arizona for the occasion. Kathan (Hickey) Vollrath came all the way from California as did Lise (Bettinger) Rak, along with her husband, Ed, and their daughter, Annie. Mark and Emily Ceisler-Blitzer came up from New York. Alumni from Boston included Chris Peckins and Susan Abookire (with children Sylvie and Robert), Beth Beigelson, Mary Barton, Alison May, Monika Woods (with fiancee Rohan), David Greenes, Josh Gundersheimer, Inna (Goldberg) Gazit (with husband Yuval), Dara Lee and Jordan Smaller, Stephanie Seminara and Brian Labow '93, Bruce Wintman and Jonna Gaberman '92, Lee Schwamm and Lisa Leffert, Zoher Ghogawala, Alik Farber, Roberto Friedlander (with friend Eugenia) and Jane Liebschutz (with friend Gary).

The reunion was a lot of fun. It was a chance to remember and laugh about our times at HMS. Also, it was an opportunity to share our various approaches to navigating today's medical world and our hopes for the future. Stay tuned—our next reunion is only five years away!

Zoher Ghogawala '91

An Alumnus Travels the New Pathway

by Harry S. Jacob

MY FELLOW ACADEMICIANS WHO suffer from the emerging insight that academic medicine is in a freefall, a therapeutic suggestion: consider a mini sabbatical trekking the New Pathway as a visiting HMS scholar. In the winter of 1995 I did a three-month stint among the Longwood high-rises and enjoyed my visit enormously. My first day back at HMS found me circling enormous cranes and even larger excavations for new building sites while looking for an old friend, Vanderbilt Hall. I can report happily that it still stands.

I came to tutor HMS students in the New Pathway "Human Systems" curriculum and am now devoted to this pedagogical model. Devoted, in spite of the astonishment registered by a close friend and distinguished HMS hematologist, who found it unbelievable that I would actually volunteer to be involved in this "touchy-feely" (sic) teaching endeavor.

In fact, the closeness that one achieves with a small group of bright, inquisitive tutees has a therapeutic effect. I was suffering from far-advanced Chronic Frustration Syndrome, a malady endemic to academic medical centers today. I do not think I have been to a single faculty meeting in the last five years that did not speak solely to fiscal issues. Those who seem to give a damn about students in my own institution are few and dwindling in lock-step with patient collections. In addition, I have not heard anything about how our faculty might develop problem-solving skills in our student progeny, although it should be obvious that such skills are fundamental to our professional calling.

How refreshing then to learn of the continued efforts at HMS to create new models for teaching. "Touchy feely" or whatever, I wanted to see for myself how the New Pathway and its nondirective tutorials work.

I did not come to tutorial teaching as a novice. My undergraduate background was at a small liberal arts institution, Reed College, where small group conferences were the norm. Forty years ago we were swept up in the then radical idea that students, after reading source literature, could create their own "knowledge" by speculating about the material. Anything was worth debating if it could be rationally defended. Professors guided gently but generally let a lot of "Brownian motion" oscillate before hauling in the rhetorical reins. I am certain that my later modest successes as clinician and scientist grew directly from this pedagogical method.

I am willing to wager that New Pathway students too will be more successful lifelong-learners and creative thinkers than traditionally taught students. (Unfortunately the bet won't be payable until analysis of the pioneer students is made at least 20 years from now!).

At HMS I initially "audited" a week of tutorials with my soon-to-be ten students. They were dissecting a case of a middle-aged woman with septal defect under the watchful eye of their cardiology/pulmonary tutor. Each case is discussed in two, two-hour tutorials, separated by three days.

The students are ill prepared (on purpose) for the first day session and quickly run into information gaps. This is one of the strategies that drives the engine of learning in this model, specifically, the need to know acts as a strong prod for the student to gather information prior to the next and ultimate tutorial session. They do literature searches and, more importantly, share learning tasks with each other. The tutorials foster true team learning, with all group members feeling a responsibility to bring information back to their colleagues.

What a difference from my HMS days 35 years ago when competition for house officerships seemed to surface and divide students from the very first day of matriculation. I felt none of this unpleasantness in my hematology group over the five weeks of our time together. Instead, great humor, collegiality and enthusiastic speculation graced our sessions.

The team learning phenomenon is remarkably enhanced by the lovely architecture of the Medical Education Center (old Building E). A central massive atrium—which provides the only unimpeded sunlight in the area—attracts heliotropic students and gre-

garious faculty members, particularly at mid day. It became apparent that conundra emanating from that day's tutorial case were being loudly thrashed out by students munching sandwiches. I rarely got through the tables without being hailed with a "Hey Harry" by one or more students wanting to try out a hypothesis about the week's case.

I decided early on that our group was gifted in their ability to speculate and create, so I encouraged digression from the case at hand, challenging my students to develop mechanisms of disease or therapy that have not been previously described. For example, one of the students provided a rational model for the mysterious long-term "tolerance" that some immune thrombocytopenic purpura patients develop following brief plasmapheresis over immunosorbent columns. When I told him that his ideas had merit, he made copies of this formulation and distributed them to his fellow students—a moving example of the team learning that I found so attractive.

I was constantly astonished at how often my group would founder in their case discussions exactly where knowledge is, in fact, shaky, or where dogma deserves to be challenged. From these impasses often came first-rate speculations by the students. In fact, my laboratory in Minnesota is currently following up on a suggestion concerning the possible sensor for thromboprotein secretion, arguably one of the hottest current mysteries in hematology.

Admittedly, the contemplative exercises typical of the New Pathway take time, both for the student and faculty person; but I submit that this is a marvelous investment of time for both. Contact with students has re-energized me.

So here is my recipe for a successful visit back to the Quadrangle: four to six weeks of tutoring in the second-year curriculum; vigorously stir in some morning reports, morbidity and mortality conferences, rounds and the like; finish with palate-clearing subspecialty conferences at the Harvard hospitals, and enjoy your heady stew. In addition, life with one's spouse is sure to thrive with Boston/Cambridge bistro hopping, museum meandering and symphony crawling. Catching up with old friends who stuck it out in Boston is another therapeutic benefit. With luck, you will brag as I do that your students regularly nipped at your ankles but never broke skin.

Harry S. Jacob '58 is professor and vice chairman of the Department of Internal Medicine and head of the Division of Hematology at University of Minnesota Medical School. Any alumnus interested in doing something similar should contact Dean Federman at 617-432-1497 or via email at dfeder@warren.med.harvard.edu.